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# CALIFORNIA AND WESTERN MEDICINE

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The careful removal of stearine—the non-antirachitic factor.

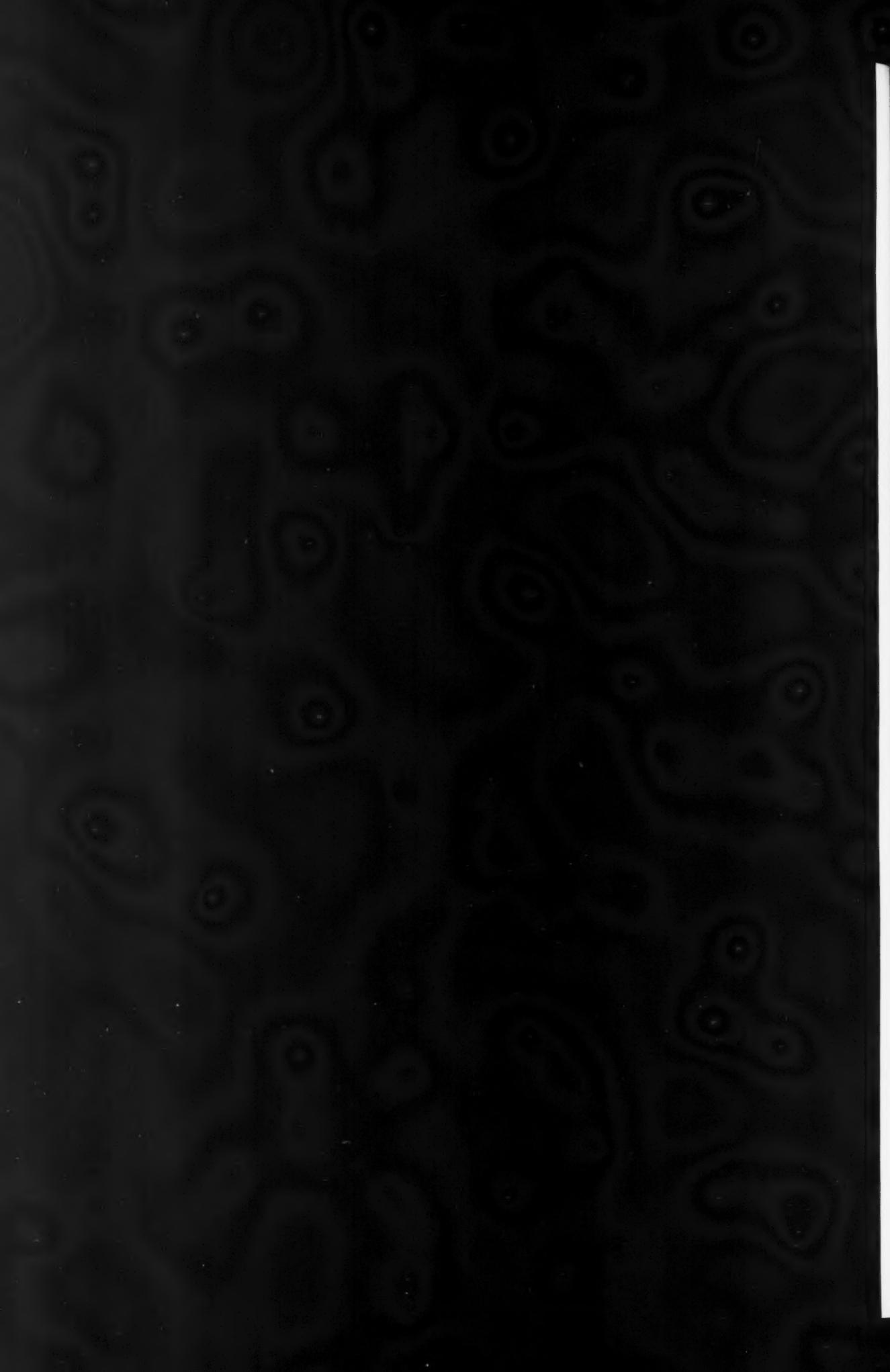
The numbering, registering, and biological assay of each batch of oil.

The selection for the physician of batches of oil that meet the standard for biological assay, and the disposal of oil

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*Manufacturers of Infant Diet Materials Exclusively*





# CALIFORNIA AND WESTERN MEDICINE

VOLUME XXV

SEPTEMBER, 1926

No. 3

## THE RELATION BETWEEN PHYSICIAN AND PATIENT

By H. D. LAWHEAD, M. D., *Woodland, California*

**T**HIS relation should first be natural and free from restraint. It should rest in mutual confidence. We hear much about the necessity of the patient having confidence in his physician and this is absolutely essential, but it is also necessary that the physician show confidence in his patient, so that the patient may speak freely and feel that his statements are accepted with assuring confidence. This means getting acquainted with the patient as a human being naturally endowed with the same sensibilities as his physician. His psychology is wholly that of the layman. Hence he is entitled to special consideration as a layman. The average patient considers himself an ordinary individual and is often overawed by the dignity, professional airs and sometimes austere manner of the doctor. He will not presume an equality nor intimacy. This intimacy is particularly true of some women and most children.

Besides, the patient being below par both physically and mentally is on this account painfully sensitive and introspective. The physician should disarm this awe and timidity as promptly and as tactfully as possible, and he can nearly always do this easily if he is willing to show himself sympathetically human as well as intelligently professional. Such introduction will relieve embarrassment, dissipate fear, overcome hesitancy, and place himself and his patient on a sort of social equality and render professional approach easy and his patient responsive. The physician should combine kindness and sympathy with a dignified simplicity. Embarrassments are naturally greater for the patient who goes to an institution or to a physician's office than it is when he is seen at home. Hence the office patient should be seen as promptly as possible and have such attention as will put him at ease, and some treatment should be instituted immediately, because treatment and personal attention are what the patient comes for and, to the anxious patient, delay often means indifference, if not neglect.

So much for the establishment of personal and professional relations. Not only should treatment be begun promptly, but throughout treatment the patient should be seen as often as practicable, no matter how favorable his progress toward recovery may be. Frequent cheery visits prevent loneliness and introspection and inspire hope. Especially should every promise made to a patient be sacredly kept. Nothing else so discourages and disaffects a patient as a broken promise. To the patient his individual trouble is the whole problem, and though he may know or should know that the physician has many others to whom he is under equal obligation and that the doctor has many interruptions, he is seldom able to so far forget his own discomforts as to excuse what appears to him a deliberate neglect. If the physician cannot keep his appointment he should see to it that the patient knows the reason.

Next as to the manner or method of service. *A generation or so ago the physician treated the patient. Today the tendency is strongly for the physician to treat the disease as a definite engrossing entity and either to forget the patient or to treat him as a sort of secondary accompaniment or case.* Science is superseding clinical experience and observation. The modern method is scientific pathology, rather than human psychology. *Formerly the doctor studied the individual; today the physician investigates a case.* Pathology is cold and inanimate, and has neither soul nor sentiment. Such treatment is an unexpected and rather chilling experience to the patient who knows nothing of the abstract and tedious processes of the laboratory to which the physician transfers his attention. He wonders what is happening. He cannot understand why he now waits two or three days at heavy expense for diagnosis and treatment, which he formerly received in a few minutes from his old doctor for \$2.50. Here again, a little immediate personal attention and careful explanation will relieve suspense and not only satisfy but please the patient.

But why this change of attitude by the physician toward his patient? The modern physician is as a rule not conscious that his professional personality is so different from that of his father, and the patient cannot understand the doctor's manner because he knows nothing of the changes which have produced this new, professional personality. Moreover this is not a personal matter with any individual physician; it is becoming general and is increasing. I doubt whether the average busy physician or surgeon realizes how little personal consideration he gives his patient as a human sufferer who is hungry for sympathy and companionship. Imagine, if you can, a consultation in which four physicians examined a patient and discussed most intelligently and scientifically every aspect of his disease, but not one among them could give the patient's name or state any of his distinctive human qualities, notwithstanding one of the number had written a detailed and most interesting history—a history which made a clear, scientific



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diagnosis, but without a spark of vital human understanding. Is the medical profession departing from that high ethical standard which established medicine as the 'most dignified and honorable of the learned professions? Are we losing the sympathetic human touch to which the patient's heart gladly responds? If so, what is the reason? Is it commercial, psychological, economic, educational, reactionary? Is it due to specialization; is it due to institutional training; will the change result in betterment of service; if not, can you suggest a remedy?

It is very probable that all these factors figure in greater or less degree in the change. The economic conditions of modern life appear to render a measure of commercialism almost necessary for the medical man. The demands upon his purse have increased and are still increasing out of all proportion to his income. These demands fix upon him a moral obligation which he must meet, and to meet it he may feel justified in resorting to strenuous business methods. Observation would seem to indicate that the change is not psychological, but rather that the neglect of the study and knowledge of the patient's psychology is partly responsible for present conditions. This change of attitude is probably reactionary only insofar as the modern physician rejects the clinical and empirical methods upon which the older practitioners had to depend, and clinical methods of the older type mean closer personal intimacy.

Education evidently has very much to do with both the ideas and ideals of present-day practice, not so much in the actual knowledge imparted, however, as in the type of teachers and methods of teaching. Present-day medical teaching is ultrascientific, specific, and exclusive. There is no medium through which the medical student or intern or even post-graduate is brought into the intimate home atmosphere. And it is impossible to know people intimately or sympathetically except through some contact with the home.

Medical teachers of today are mainly specialists; whereas the teachers of half a century or more ago were mostly general practitioners, or at least physicians who at some time had done practice which gave them intimate home contact. Such teachers, knowing the psychology of the home and its members, naturally, but perhaps unconsciously, transfused among their students more or less of the humane spirit. Formerly it was not unusual for a professor or instructor to ask senior students to accompany him to the homes of his patients. The whole trend of medicine is now toward specialization. This is not only natural but unavoidable. The field is so large that, as the various sections and departments develop, it is only by segregation and specialization that the vast work can be handled. And the specialist cannot know the composite individual. His attention is necessarily limited to his special portion of the organism. Thus he loses interest in the human cosmos.

Institutional training is a very potent factor in the recent changes. It is difficult to determine whether specialization or institutional training has the greater influence. Even our larger universities with their medical departments, with their fully equipped laboratories, realize that the wholly scientific environ-

ment, while it qualifies the student pre-eminently for the study of disease, disqualifies him for successful contact with and service to patients not familiar with institutional methods. In fact so fully is this realized that some of the universities, the University of Pennsylvania, for example, are establishing a type of university extension course through which physicians in different parts of the country may have the benefit of the advances in medicine and surgery without breaking their home contact.

Commenting upon the modern medical school, Arthur (*Journ. Ind. Med. Assn.*, May, 1924) says: "It has been truthfully said that our medical schools are unfitting men to practice medicine at the bedside. This being true, it follows that they are defeating the main purpose of the schools, which is the development of general practitioners of medicine." Speaking of medical teachers, Arthur continues: "Too many of them are not concerned with medical knowledge, but are conducting their work for the sole purpose of building up their science." I do not believe any true medical teacher does this consciously. G. Van Ness Dearborn is quoted by Arthur as saying of our medical schools: "Obviously, they have in general belied their high privilege of first studying and then teaching the relations and mutual dependence of body and mind; they have neglected psychology." To which Arthur adds: "We should have only applied physical science taught in our undergraduate medical schools along with a well-grounded course in applied psychology."

Review of medicine within the last fifty years shows that within this half-century the practice has passed through three stages, as follows:

First—That which Professor Henry Gibbons, Sr., termed rational empiricism.

Second—Therapeutics as an art represented by such leaders as Dr. Frank R. Billings.

Third—The scientific method of the present day.

But whither are our scientific and commercial methods leading us? Always conservative and manifesting an attitude of aloofness, we have never seriously cultivated an interest in the common people and their common needs. We as a profession have never been of the people. Instead, especially since *institutional treatment has become so general, we have substituted the laboratory for the bedside and the hospital for the home, and left the broad and fertile field of community interests and ailments to be exploited by the ignorant but cunning and mercenary quack.* The extent to which the medical profession, and consequently the public health, has lost to the cults is indicated in the following statement by Alice S. Cutler of Los Angeles who found that of 120 women and girls examined by her, and each of whom she asked who was her family physician, 722 employed osteopaths, 120 chiropractors, 133 Christian Scientists, and only 125 educated non-sectarian physicians (10 per cent). These figures, however, may not fairly indicate the general status throughout the country, as these examinations were held in Los Angeles, where cultism is notoriously strong. But at best they are neither comforting nor assuring. A broader study of this subject together with a careful consideration of the type of capable men who stand at the heads of our leading medical schools will, I believe, discover that the cause of our

present medical indifference lies further back in our educational system than the medical colleges, even further back than our literary and scientific colleges. Our young people, both men and women, appear to lack the ethical sense or regard which characterized the students of a generation or two ago. Take Harvard University, formerly the aristocratic high-water mark of culture, medical learning and classical erudition, among American institutions. Today without the asking it gets a \$5,000,000 endowment for the establishment of a commercial school to train young men for positions at \$10,000 and up, while the head of the department of dramatics was denied \$3000 for necessary equipment for original dramatic work. Is it not possible that in our rapidly developing science and materialism we are neglecting in our homes and our schools those moral and ethical influences and principles which underlie human action?

Thus far we have implied that the medical profession is responsible for present conditions. And this is true in the main, but the responsibility does not all belong to the profession by any means. Modern education with its various adjuncts, from the university to the farm bureau, amplified through the daily newspapers, literary magazines, free libraries, rural delivery, automobile, telephone, radio, etc., has narrowed very much that "no man's land" socially between the profession and the people. Under these various privileges and stimuli many people have grown so independent and mandatory that they expect and sometimes demand of the physician unreasonable or impossible considerations.

Neither should we underestimate the value of scientific medicine or discourage independent research. Through these and these alone comes all substantial progress in medicine, surgery, sanitation and preventive measures. Evidently, however, there is a normal mean between these extremes which, if reached and maintained, would so blend and harmonize clinical observation with modern scientific methods as to yield the best service to the patient and the greatest satisfaction to the physician.

Feeling that this subject was of considerable importance and desiring to present a consensus of the best opinion available, I sent the following letter to a number of prominent physicians, and their replies are appended as discussion:

#### THE LETTER OF INQUIRY

"My dear Doctor—I trust that the importance of the question involved may excuse the liberty of this inquiry. "Is the medical profession departing from that high ethical standard which established medicine as the most dignified and honorable of the learned professions? Are we losing the sympathetic human touch to which the patient's heart gladly responds?"

"If so, what is the reason? Is it: 1. Commercial. 2. Psychological. 3. Economic. 4. Reactionary. 5. Educational. 6. Is it due to specialization? 7. Is it due to institutional training? 8. Will the change result in betterment of service? 9. If not, can you suggest a remedy?"

"The reason for this inquiry is that, whereas in the past the physician treated the *patient*, the present tendency appears to be for the physician to treat the *disease* as a distinct entity."

#### REPLIES

**T. C. Edwards** (Salinas, California) — I have thought long and seriously about the things mentioned in your questionnaire. Quick transportation

is mixing people so much of late that the intimacies of a few years ago are becoming the casualties of today. The \$ is too frequently the veil through which the patient is seen. Specialism does not see the patient at all. Whatever lessens genuine personal service is making us mercenary in the eyes of our patients.

#### Answers to questions submitted:

1. Commercial: I think this is entering into medicine to a greater degree than formerly and acts as cause.

2. Psychological: No.

3. Economic: I do not think so.

4. Reactionary: No. We all believe that such step has not been a reaction. We react from things we dislike.

5. Educational: Rather lack of education showing the gain by intimate personal service.

6. Is it due to specialization? I think this important cause.

7. Is it due to institutional training? Partly.

8. Will the change result in betterment of service? I think not.

9. If not, can you suggest a remedy? Insist that every M. D. be taught by precept and example that personal service to the patient does more toward restoring dysfunction than any or all remedies save the near specifics, viz., antitoxin for diphtheria, etc.

**J. Wilson Shiels** (San Francisco)—If ethics be the knowledge of right conduct, based upon commendable character, and man's right conduct ever holds a high moral obligation to do to others as one would wish others to do to one, then I do not think the medical profession as a whole has lost one whit or departed from the standards of splendid honor producing its past dignity.

There must ever be good and bad in all professions, however sternly set down the rules of conduct. Honor and all ideal attributes of character come from within, out. The rules guiding men to selfless distinction are never potent enough to awaken a dead sense. They may create a veneer, but not truth. But I deem, however ethical, we are "losing the sympathetic human touch," and this loss is deplorable and the direct consequence of an ever-increasing knowledge of cause. We seek cause with scientific heartlessness. A clever definition of a corporation is: "An artificial person without a soul." We might well paraphrase this and say: "A scientific man is truly a person without a soul," for to be soulful is to be kind, and kindness, producing sympathy, frequent misdirects the search for cause.

I do not think that one, two, three, or four of your questions influences the sympathy of men worthy of our profession unless of course you mean by "reactionary" the result of ingratitude on the part of the patient; then truly we must realize this as a factor in the loss of sympathy, for it is hard to be kind and understanding when ingratitude exists. It takes a man of unusual quality to wipe out ingratitude with love. Most of us are quite vanquished by it.

Five, six, and seven. Do most assuredly dull the edge of human touch, for we utilize the sufferer as clinical material for the development of our own welfare and *pride*.

The remedy is to exalt and emulate the old doctor,

for he was ever one who made two words of the word "gentleman" and, while doing so, reverently let us add to his sanctity a high selfless scientific knowledge, and when this knowledge can no longer bring cure or surcease of pain, give the sufferer the understanding love of brotherhood.

**Herbert C. Moffitt** (San Francisco)—It is difficult to answer your questions singly. I feel as many men do who have been long in medicine that the practice of the profession is becoming less satisfactory than it used to be. This is partly the fault of the public and partly the fault of ourselves. People nowadays generally have very little faith and very little patience. We have been trying the last years to teach them a smattering of medicine and have unfortunately encouraged them to look for quick results in treatment. Enthusiasm of surgeons, whether on account of lack of proper patience or sometimes for commercial reasons, has, I think, reacted badly on the practice of medicine. There can be no question that we have been making medicine too expensive for many people and emphasizing the necessity of laboratory investigations far beyond their importance. There is no question that our training in medical schools in the last ten years has tended to specialization and has not encouraged the true art of medicine. It is just as difficult to suggest a remedy for the present medical situation as it is to suggest a remedy for our legislative overactivity. I feel that overemphasis has been given to the necessity for hospital treatment and that we shall later return to a different type of general practitioner, one who will have more help in the way of proper assistants and nursing staff, but who will at the same time resume the personal relations with his patients and keep them for a number of years, directing when necessary what specialist they should consult rather than have them choose unwisely special treatment on their own volition.

Apparently there comes every once in a while a generation which harks back to restlessness and lawlessness, and it takes about another generation to reach solid ground again. Fortunately after reaching a new level it is usually a higher one than before, and I think that after some further years of unrest in the profession, medicine will again get on a more satisfactory basis. I should be very much interested to find out what conclusion you have reached after a study of the situation, as I have written once or twice in the last years on similar subjects.

**W. J. Mayo** (Rochester, Minnesota)—No medical graduate should be allowed to enter a specialty until he has had at least two years' general practice, preferably in the country. The young man leaving his school or internship is well equipped with theory and scientific knowledge, but is only half qualified for successful service. He lacks that experience and personal contact with humanity which is equally essential for success.

**Ray Lyman Wilbur** (Stanford University)—In my opinion there is a marked tendency to lose the human touch in the practice of medicine. I think it is because the main attention of the profession has been engrossed during the period of very rapid change with the application of the newer developments. With the laboratory and other modern methods of teaching, diagnosis has assumed such im-

portance that many have felt that when the diagnosis was made the real job had been accomplished. Decreased interest in therapeutic measures of all sorts has brought about the remarkable recent development of the various cults.

I think that we can make some considerable improvement with the medical students who are being trained at the present time, but that the profession trained in the last few years will have to learn by some rather severe lessons.

**Frank Smithies** (Chicago)—I do not think that we as physicians are losing the sympathetic human touch. At times it would seem that the struggle for existence results in men forgetting that we have ethical standards.

While we may have neglected human psychology, one must not forget that the various maneuvers of laboratory diagnosis exert a psychology probably as satisfactory as what you term bedside psychology. There is no question that personality is a very important part of the physician's armamentarium for practice, but there is equally no question that many men are simply personality doctors who do very little for their patients.

There is no doubt about some physicians getting into specialty work too early. In my opinion every physician ought to have at least five years general work before he takes up a specialty. I think also that frequently the attempt to make a patient fit into a specialist's line robs that patient of much assistance which could have been assured by general examination and treatment. I do not think the human touch is lost because of the type of medical education and training the physician receives.

**Frank Billings** (Chicago)—Overspecialization in medicine, greatly accentuated by the World War, is likely to induce a loss of perspective and the patient is viewed no longer as a human being, but solely as a case. Scientific laboratories are necessary, but they should not displace the trained hand and trained mind of the industrious, painstaking and sympathetic general practitioner. The future safety, health and prosperity of the people demand the preservation of the character-building home, and as a factor in the necessary principle of community welfare the family physician and his domiciliary visits are essential.

1. There is an unfortunate and increasing lack of intimate personal contact between physician and patient for which the doctor is mainly, and the patient partly, responsible.

2. This is due largely to ultrascientific training by highly specialized teachers, the patient serving simply as the material which the scientist investigates regardless of feeling or personality.

3. To exclusive institutional training and treatment which prevent home contact and personal relation.

4. To indifference on the part of the profession to certain types of physical treatment of which the mercenary and unscrupulous quack has taken bold advantage, thus displacing and discrediting the conscientious though conservative physician.

5. The tendency of graduates to leave college as specialists.

6. To extravagant privileges, opportunities and indulgences, especially on the part of our assumed

"better class," through which these people expect and even demand unreasonable and sometimes impossible considerations.

7. The "no man's land" between science and human psychology should be reduced to the minimum by a clearer understanding, stronger sympathy, and closer and more harmonious co-operation between clinical medicine and scientific investigation, made practical by such instruction to the medical student as will enable him, when a physician, to approach his patient with sympathetic understanding.

8. We believe that general medicine developed as scientifically as possible and practiced as a true art should be the basis of all specialties, and that to this end human psychology and personal contact with average patients should form a part of every medical student's education.

We believe this can be done and will be finally accomplished.

#### SUPRAPUBIC PROSTATECTOMY†

By VERNE C. HUNT\*

(From the Division of Surgery, Mayo Clinic)

*An unprejudiced analysis of the mortality rate and ultimate functional results leaves little choice among the modern methods of prostatectomy.*

*Of prime importance is the general management of prostatic obstruction, with bladder drainage either by urethral catheter or cystostomy as the keystone, prostatectomy being merely incidental.*

*To achieve the best ultimate results and lowest mortality rate requires preliminary treatment in all cases, accurate surgical expedition, and careful post-operative management.*

Discussion by Anders Peterson, Los Angeles; Granville MacGowan, Los Angeles.

THE field of general surgery is so broad that it no longer is possible for a surgeon to remain proficient in all its branches. In order that the patient may profit by the increasing scope of surgical knowledge there must be a division of work, and specialization to a certain degree must be adopted if progress in surgery is to continue. The specialization of thyroid, neurologic, thoracic, and orthopedic surgery to the degree of particular attention to these fields, but not necessarily to the degree of excluding other fields of surgery, has resulted in a higher type of co-operative work, the exercise of riper judgment, better end-results, and lower mortality rate.

Deaver has shown that the average mortality rate following the operation of prostatectomy by the inexperienced or the occasional operator in this field of surgery is between 20 and 30 per cent, while the average mortality rate following the operation by urologic surgeons or those paying particular attention to this field of surgery is between 3 and 6 per cent.

In the early years of prostatic surgery, little was known of the effects of prostatic obstruction; no methods had been devised for measuring those effects, and no therapeutic means were available for obviating them. However, investigation has now re-

sulted in reliable tests of renal function, and experience has taught their application, so that more or less standardized methods have been devised for the more successful management of the patient with prostatic obstruction. Experience has also taught that the more modern adequate treatment of prostatic obstruction embraces more measures than simply surgical removal of the gland. As Bugbee has said, removal of the prostate gland is a mere incident in the treatment of prostatic obstruction.

Since prostatic obstruction occurs most commonly between the ages of 60 and 75, far beyond the average age for surgical conditions, the patient must be considered a substandard risk, not only by virtue of his age, but because of the cardiovascular changes coincident with that age and the renal insufficiency incident to urinary retention. Recognition of these conditions has led to methods of preparation enhancing the patient's physical and organic reserve, which lessen the risk of prostatectomy and reduce the mortality rate.

Belfield, in 1890, was the first to present a statistical review of the merits of radical surgical procedures for the elimination of prostatic obstruction. He reported a series of 133 radical operations by fifty surgeons, and determined their merits by comparing their mortality rates and end-results with those of palliative cystostomy. He furthermore estimated the merits of the perineal, suprapubic, and combined operations of prostatectomy by the same means. Perineal prostatectomy or prostatectomy had been performed in forty-one cases of this series with four deaths, a mortality rate of 9.7 per cent; suprapubic prostatectomy in eighty-eight with twelve deaths, a mortality rate of 13.6 per cent; and combined suprapubic and perineal operations in four with one death. Voluntary urination was restored by both perineal and suprapubic operations in 71 per cent of the cases. Unquestionably the average mortality rate following the perineal operation was lower in the early years of prostatectomy than that following the suprapubic operation. Numerous arguments have been presented since Belfield's original report, tending to set forth the advantages and disadvantages of the perineal and suprapubic operations. Isolated reports to the contrary notwithstanding, it appears from the present evidence that the average mortality rate following perineal prostatectomy until recent years was lower than that following the suprapubic operation, but an unprejudiced analysis of ultimate results and mortality rate following both perineal and suprapubic operations by those experienced in the respective methods shows that these factors can no longer be utilized to discredit one or the other method.

Gardner and Young, each an exponent of a different method, have shown that many consecutive operations may be performed without a surgical fatality. It is evident, then, that there are several methods of surgical removal of the prostate which are apparently productive of equally good results. The choice of method may therefore be based on the general condition of the patient, personal preferences, and the qualifications of the surgeon.

Cecil, Hinman, and Geraghty have aided in elimi-

\* Read by invitation before the California Medical Association.

† Verne C. Hunt (Mayo Clinic, Rochester, Minnesota). M. D. Rush Medical College, 1913. Practice limited to Surgery. Publications: About twenty-nine on various surgical subjects.

nating technical difficulties of the perineal operation, obviating injury to the rectum, and urinary incontinence. Bugbee, Judd, Gardner, and others have modified the suprapubic operation with enhancement of ultimate functional results.

It is uniformly agreed that drainage of the bladder as a preliminary step forms the keystone of the successful management of prostatic obstruction. In the evolution of suprapubic prostatectomy it was a common observation that patients who had survived simple cystostomy for retention or for removal of vesical calculi, and had recovered from the depression, subsequently underwent radical removal of the prostate gland with a relatively low mortality rate. This gave impetus to the adoption of the two-stage operation, which is still indispensable when there are associated vesical lesions, severe cystitis, marked renal insufficiency, senility, intolerance to urethral catheter, and similar conditions.

The two-stage operation is indicated in certain cases, but it is questionable whether it deserves routine adoption. The fact that drainage of the bladder is the important factor in preliminary treatment does not carry with it the obligation of cystostomy previous to prostatectomy, is attested by the favorable results of drainage by means of an indwelling urethral catheter. In my experience, intolerance to the urethral catheter when there are no associated vesical lesions, that is, calculi or diverticula, occurs in but approximately 6 per cent of cases. Cecil has reported one hundred cases in which urethral catheter drainage when necessary was an adequate preparation for perineal prostatectomy in all but six, in which suprapubic drainage was necessary preliminary to prostatectomy. Urethral catheter drainage, judiciously carried out in selected cases, limits the surgical procedure to one operation, and permits visible conduct of the operation and accurate hemostasis.

In 1783 cases in which suprapubic prostatectomy was performed at the Mayo Clinic between January, 1913, and January, 1925, vesical calculi were associated in 12 per cent, and surgical diverticula in 5 per cent. Cystitis is most marked in cases in which these lesions are associated, and it has been my experience that such severe cystitis is not readily amenable to drainage of the bladder by urethral catheter. Such cases are best treated by cystostomy, removal of calculi, or excision of diverticula at one stage, and removal of the prostate gland later. Prostatectomy, simultaneous with removal of vesical calculi and excision of large diverticula in the presence of marked cystitis, is accompanied by a higher mortality rate than the two-stage operation. Marked renal insufficiency, which obviously may require drainage of the bladder for several months before prostatectomy may be safely undertaken, often requires cystostomy to avoid a long period of hospitalization. In extreme senility (in the presence of low physical and organic reserve) the divided operation unquestionably is accompanied by the minimal risk.

It should not be inferred that preliminary cystostomy is without risk, for there is a certain risk, not because of the magnitude of the operation, but

because of the condition of the patient at the time. Aschner has reported a mortality rate as high as 47 per cent in seventeen cases treated only by cystostomy. The two-stage operation affords an apparently low mortality rate, as the deaths following cystostomy are not included in the mortality rate following prostatectomy. The one-stage operation following preparation in selected cases by urethral catheter has a high percentage applicability, as is shown by its use in 1346, or 75.4 per cent, of 1783 cases. The mortality rate following the two-stage operation when employed only in selected cases on the preceding indications is higher than when used as a routine procedure. This may be accounted for by the poor general condition of the patients selected for the two-stage operation, as compared to the condition of the patients prepared by urethral catheter drainage for the one-stage operation. A short period of time or a small series of cases will prove a contention for either method. However, a long period of time furnishes a more accurate perspective of the facts. Whereas, the average mortality rate following suprapubic prostatectomy at the Mayo Clinic for the twelve-year period from January, 1913, to January, 1925, was 5.5 per cent, ranging from 11 per cent in one year to 3 per cent in the later years, with a series of one hundred cases as low as 2 per cent, the average mortality rate following the two-stage operation was 7.3 per cent as compared to 4.8 per cent for the one-stage operation. Had the two-stage operation been employed as a routine in all cases the mortality rate following it would have been lowered, as the general condition of the patients selected for the one-stage operation was better.

Inasmuch as approximately 75 per cent of carefully selected patients may be satisfactorily prepared and operated on by the one-stage operation with relative safety, the diluent effect on mortality rate would seem an insufficient reason for employing the two-stage operation as a routine. However, whatever the various opinions regarding the one- or two-stage procedures, drainage of the bladder by urethral catheter or cystostomy allows recovery from renal insufficiency, stabilization of renal function, and decreases the stress on the cardiovascular system and respiratory apparatus. During the period of drainage preliminary to prostatectomy such therapeutic measures may be employed as required to increase the renal, cardiovascular, and pulmonary reserve.

#### FACTORS OF SAFETY

It has long been recognized that in all cases of prostatic obstruction with gross evidence of renal insufficiency and cardiovascular disease such preliminary treatment was necessary as would increase operability and decrease the operative risk. However, a recent review of all the prostatectomies performed at the Mayo Clinic during the last twelve years revealed that 658 patients (36.9 per cent) considered excellent surgical risks because of small amounts of residual urine, little or no renal insufficiency, and excellent general condition, were operated on without any preparation whatsoever. Thirty-seven and seven-tenths per cent of all deaths occurred in this group. Even though 437 (24.6 per cent) of the patients, because they were considered

the poorest surgical risks, were prepared by cystostomy on account of associated vesical lesions, marked renal insufficiency, and similar conditions, this group furnished but 30.7 per cent of the deaths.

The causes of death may be considered under three groups: (1) pre-existing organic disease: renal insufficiency, cardiovascular disease, and chronic pulmonary lesions; (2) surgical accidents: hemorrhage and shock; and (3) post-operative complications: pulmonary complications, general sepsis, embolism, and peritonitis.

Causes of death enumerated under Group 1 were responsible for 75.7 per cent of the deaths among the patients who had been considered the best risks and who had received no preliminary treatment, as compared to 45.4 per cent among those who had been considered the poorest surgical risks and who had been prepared by suprapubic cystostomy. These facts support an earlier contention that prostatectomy is never an emergency procedure, and leads me to assert that all patients require preliminary preparation by bladder drainage for at least ten days prior to prostatectomy, irrespective of an apparently high organic and physical reserve.

The fact that preparatory treatment bears a direct relationship to mortality from post-operative complications enumerated under Group 3 is shown in a consideration of the one cause of death, pulmonary embolism. Of the deaths during the last five years from post-operative complications, pulmonary embolism was the cause in thirteen cases (70.5 per cent). However, eight of the patients had been considered excellent surgical risks and had had no preliminary treatment, whereas three had had less than seven days' drainage of the bladder by urethral catheter. Eleven (84.6 per cent) of the patients dying from this cause had had no, or very little, preliminary treatment; one patient had had preliminary suprapubic cystostomy, and the other had had eighteen days of drainage by urethral catheter. This can hardly be regarded as a coincidence, but would lead to the deduction that preliminary preparation bears a direct relationship to the incidence of post-operative pulmonary embolism.

The chief causes of death attributed to surgical accidents are hemorrhage and shock. While deaths due to anesthesia are rarely reported, they unquestionably have occurred. Anesthesia, if not a direct, is a secondary or remote cause of death when inhalation types of anesthetics are used. The depressant effect of ether on the diseased kidneys has long been recognized, and various types of anesthetics have been recommended. Chute, Stirling, and many others have expounded the advantages of intraspinal anesthetics and have reported their successful use. However, until such time as measures can be devised to maintain the blood pressure during intraspinal anesthesia, it may hardly be considered the safest method. Sacral anesthesia, popularized in this country by Labat, Meeker, and Lowsley, possesses all the advantages of intraspinal anesthesia and none of the disadvantages of general anesthesia, and it is perfectly safe. During the last three years 95 per

cent of prostatic operations at the Mayo Clinic have been conducted under this type of anesthesia.

The greatest factor of safety, so far as surgical accidents are concerned, is accurate hemostasis. It has been accepted that a variable amount of bleeding may be unavoidable after prostatectomy. However, because a patient has prostatic obstruction it does not justify loss of blood during or after operation; neither can the patient stand unnecessary bleeding. The one-stage operation affords exposure, permits accurate visible conduct of the operation and complete hemostasis. Various hemostatic procedures have been resorted to, but experience with the Pilcher bag in over 500 cases proves that this is the most adequate method.

The one-stage suprapubic visible operation permits accurate removal of all obstructing portions of the prostate, excision of tags of mucous membrane, avoids injury to surrounding structures, insures against possible incontinence, and is accompanied by excellent functional results.

In a recent review of the results of 1313 suprapubic prostatectomies for benign prostatic hypertrophy performed at the Mayo Clinic, 54.12 per cent of the patients were relieved of all symptoms as a result of the operation; 25.28 per cent were markedly improved; 13.27 per cent were slightly improved; 4.49 per cent reported no change; and 2.82 per cent stated that their condition was worse. In other words, 92.67 per cent were improved by the operation. The patients who were but slightly improved, those who experienced no change, and those who were worse, had had urinary obstruction and retention for a long time before operation, irreparable damage to the kidney had occurred, and re-examination in a number of them has revealed a persistent and progressive pyelonephritis.

#### DISCUSSION

ANDERS PETERSON, M.D. (1136 West Sixth Street, Los Angeles)—I want to express my appreciation of the vast amount of work Doctor Hunt has done in reviewing this large series of cases of prostatectomies.

Offhand I think this is the largest group of cases ever presented by one clinic, and the cases are selected over a space of time since the improved methods of preparation, as well as surgical technique, have been utilized. Hence, the deductions made should express very nearly the true results of this operation.

As the matter of choice, whether a suprapubic or perineal route is employed, does no longer center around the size or consistency of the gland to be removed, but depends rather upon the training of the surgeon (it seems that no surgeon has yet developed himself to perfection in both methods) if the end-results are equal by either method, this alone explains the continuance of both types of operation.

For the purpose of preparation, I like to think of prostates in four classes:

In the first group I place those in patients of the early sixties, with a moderate amount of residual urine, adequate kidney function, and general condition otherwise good. Here intermittent catheterization over a period long enough to establish the fact that no reaction is produced by this manipulation should be carried out.

In the second class of patients I would place those with fairly large amounts of residual urine, where infection was developed with the associated general depression. Here intermittent catheterization is carried out for a reasonable period, and the permanent catheter drainage is instituted until the condition is favorable for prostatectomy.

In the third group fall those patients in whom inter-

mittent catheterization followed by permanent catheter drainage fails to produce satisfactory conditions for prostatectomy; suprapubic cystotomy under local or sacral anesthesia is for them the operation of choice.

In the fourth group are patients with acute retention, where catheterization is very difficult or impossible, and where severe bleeding has occurred. A suprapubic cystotomy becomes essential at once.

Hunt's warning that it is unsafe to operate upon any patient without a period of catheterization, even in the apparently most favorable subjects, I think is a rule that should be followed.

**GRANVILLE MACGOWAN, M. D. (Brack Shops Building, Los Angeles)** — In reviewing the subject of suprapubic prostatectomy, as discussed by Doctor Hunt, I feel that in general his view is sound, but there are certain statements which my experience would lead me to differ with or to modify.

In the first place, he says "it should not be inferred that preliminary cystostomy is without risk." If one does a preliminary cystostomy instead of a preliminary cystotomy, there should be no appreciable risk, if this is done properly and measures are taken to protect the loose fascia which fills the space between the bladder wall and the anterior wall of the abdomen, so there cannot be any contamination or infection of the pelvic fascia. With this removed, all risk from the operation should be less than one-tenth of one per cent.

The value of the two-stage operation in suprapubic prostatectomy is not to be estimated by the mortality rate prevailing in a well-equipped surgical infirmary where only skillful operators are allowed to do the operating, but rather by the results obtained by the average urologist or by the general surgeon doing all the urological work which presents itself to him, and under these conditions I am sure it will be found that the routine two-stage operation will be followed by a much lower mortality rate than where it is employed only in the most desperate cases.

In estimating the factors of safety in prostatectomies, it is well not to be misled by the appearance of healthfulness of the individual who applies for relief. It is unwise to say "we will take this man and remove his prostate without any previous preparation, because he has a normal phthalein output, there is no pus in his urine, the amount of his residual is not large, his heart is sound, his blood chemistry is satisfactory, therefore nothing can happen to him." Something can happen to these people, and something does happen to a sufficient number of them to make the thoughtful and considerate operator very wary. Conditions so full of promise always arouse suspicions in my mind that I may lose the man, because it seems impossible to do so. Men at the age when they require prostatectomies are never entirely well. Their muscular system, blood-vessels, nervous system, and their kidney function all may seem excellent, but may not be able to stand a sudden strain or an increased load. To do a suprapubic prostatectomy in two stages is certainly a safer operation for the patient, but not by any means so convenient a one for the operator.

When Hunt says that all patients require preliminary preparation for prostatectomy by bladder drainage for at least ten days prior to prostatectomy, he is stating a fact, and if suprapubic prostatectomy has been determined upon, I aver that it is more satisfactory to do that drainage by means of a properly performed suprapubic cystotomy, which is innocuous and does not complicate the subsequent removal of the prostate, for if it is desirable that the entire vesical neck should be seen by the operator, this can be accomplished in an entirely satisfactory way by using a transverse incision for the preliminary cystotomy and obtaining the subsequent necessary exposure by a longitudinal central incision from the base line of the transverse cut up as far as desired toward the umbilicus, a method of approach to the bladder which I have named the aeroplane incision.

In a resumé of the results of the 1313 suprapubic prostatectomies Hunt finds that 50 per cent were relieved of all symptoms as a result of the operation; 25 to 28 per cent were markedly improved; 13.27 per cent were slightly improved; 4.49 per cent reported no change; 2.82 per cent stated that their condition was worse. I have

watched Hunt operate and I know that he has great skill, but if this report is correct it is not one to be proud of. To have thirteen survivors out of every hundred persons undergoing a grave surgical operation, with only a slight improvement of the condition for which they were operated—4½ per cent no better and 3 per cent worse—in a great clinic where every facility is present for the care of these patients, looks to me as if the patent obstructions had been removed from the bladder and bladder neck but the concealed ones in the anterior prostatic urethra or the perineal or phallic parts of the urethra had been overlooked in the examination made before the individuals came to operations. A persistent pyonephritis will account for the continuous appearance of pus in the bladder following prostatectomy, but it will not prevent the individual from emptying his bladder.

I agree entirely in the matter of there being but little choice in the modern methods of prostatectomy, and that the item of greatest importance is the general management both before and after the operation.

**DOCTOR HUNT (closing)**—I wish to express my appreciation of the discussions by Doctor MacGowan and Doctor Peterson. Everyone engaged in this type of work recognizes the hazards by virtue of the age of these patients, the associated organic lesions of that age, and those incident to prostatic obstruction, and quite universal agreement exists regarding the necessity for stabilization of organic and physical reserve by preoperative treatment. The type of patient who submits himself for operative relief, the amount of renal insufficiency, instability of organic reserve, and the conditions under which the surgeon works, influence to a large extent the manner in which these patients may be satisfactorily prepared for prostatectomy.

I have reference to the difference of opinion which exists regarding the cystotomy or cystostomy method of draining the bladder preliminary to prostatectomy as opposed to the permanent indwelling urethral catheter method facilitating the one-stage prostatectomy. There are many advocates of the two-stage suprapubic operation who support their preference by low mortality rate and good ultimate functional results, and I quite agree with Doctor MacGowan in his statement that the routine two-stage operation will have a much lower mortality rate than where it is employed in the most desperate cases. However, in the routine two-stage operation, the relatively higher mortality rate in the desperate cases is diluted by the low mortality rate in those patients considered as good surgical risks. In my experience this latter group of patients, comprising 75 per cent of the total, can be operated upon by the one-stage operation after adequate urethral catheter drainage and preparation, with a mortality rate as low as with the two-stage procedure.

Regarding the results of suprapubic prostatectomy, I wish to state that these are accurate determined results in 1313 patients. These results are obtained by careful personal investigation and not from general impressions or the evidence of an occasional patient. They are determined in terms of frequency, difficulty, pain, and ability to empty the bladder completely. When I speak of complete relief of all symptoms in 54 per cent plus, marked improvement in symptoms in 25 per cent plus, slight improvement in 13 per cent plus, the patient's idea of the result obtained is expressed, whereas the surgeon's idea of a good result may be based entirely on the re-establishment of voluntary urethral urination resulting in complete emptying of the bladder after removal of the obstructing prostate, with which he may be satisfied. The incidence of failure of obtaining such a result after the one-stage visualized suprapubic prostatectomy is entirely negligible. Other factors than removal of the obstruction in the prostatic urethra and vesical neck, even though the result of prolonged obstruction or associated with the obstruction, enter into determination of ultimate results. A persistent pyelonephritis may account for continued frequency, and while the obstruction at the bladder neck may be removed with complete voluntary emptying of the bladder, nevertheless the continued frequency will not allow the patient to admit a good result as liberally as the surgeon who finds no residual urine after prostatectomy.

I wish to emphasize that 90.2 per cent plus of the pa-

tients, after suprapubic prostatectomy, in whom results could be accurately determined have been entirely relieved from all symptoms or improved. After a critical review where any question existed regarding the amount of benefit the patient received, the advantage was given the patient and not to the surgeon or the operation.

### PATHOLOGY OF SENSIBILITY†

By B. BROUWER \*

(Department of Neuropsychiatry, University of Amsterdam)

PATHOLOGY of sensibility is one of the chief means used in diagnosing and localizing diseases of the nervous system. Important work in this field of study has been done by Head and his co-workers in England. I take for granted that you know Head's work, hence I shall only refer to the principal points. In his conception there are three systems by which stimuli for sensibility are caught up in the periphery. The first is deep sensibility, which originates chiefly in the muscles and in the joints. By this, impulses produced by pressure and by movements are conducted to the central nervous system. The other two systems conduct stimuli caught in the skin and in the subcutaneous tissue. These systems are the protopathic and the epicritic. The former responds to painful cutaneous stimuli and to the extremes of heat and cold. The latter, the epicritic sensibility, serves for light touch, for discrimination of two points and for appreciation of the finer degrees of temperature.

In co-operation with Doctor Schoondermark I examined at Amsterdam many lesions of the peripheral nerves in man. We have seen many of the facts described by Head. Our investigations, however, did not convince us that the theory of the existence of two distinct pathways for protopathic and epicritic sensibility has yet been proved. But we felt that this work is a great advance in science, especially because phylogenetical ideas have been introduced into the doctrine of clinical sensibility and that autonomic sensibility has been brought to the foreground.

The centripetal side of the autonomic nervous system has not been so clearly analyzed as was the centrifugal by Gaskell, Langley, and others. But still we know sufficient facts to work with in physiology and in clinical examinations. In my opinion several sensory stimuli are brought from the surface of the body to the central nervous system along sympathetic fibers.

All the sensory stimuli caught in the periphery of the body are sent to the spinal cord and to the brain. For a better understanding of the matter we shall limit ourselves to the spinal cord. The same line of thought may be followed concerning sensibility of the head which is conveyed to the oblongata by the trigeminal nerve.

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The sensory impulses reach the intervertebral ganglia and then proceed through the posterior roots. Here in America Ranson found that there are many unmedullated fibers in the posterior roots. He believes that these conduct the protopathic sensibility of Head.

In the spinal cord these stimuli proceed along two separated systems. One group reaches the gray substance of the same side, and here the first sensory neuron ends. A new neuron issues in the cells of the posterior horns. It mostly crosses and proceeds upward in the anterolateral part of the spinal cord. This system comprises the stimuli for pain, heat and cold and a part of tactile sensibility. The other group avoids the gray substance and ascends in the posterior column of the same side. It ends in the nuclei of Goll and Burdach, which lie at the upper border of the spinal cord. Here it is that the second sensory neuron begins, crosses in the oblongata and ascends to the optic thalamus. These sensory pathways in the posterior columns of the spinal cord conduct stimuli of deep sensibility and a part of the tactile impulses. All these sensory stimuli are sent upward to the optic thalamus, and from there to the cortex of the brain and are there associated with many stimuli of different qualities.

Many investigators consider the sensibility of the posterior columns as a higher form. It enables us to recognize the shape and size of the objects and to distinguish two points applied simultaneously. The other form serves more for feeling and is more vital, while the former is more intellectual in character. Hence they are opposed to one another and are called the gnostic and the vital sensibility. The fact that the sensory functions of the posterior columns are regarded as a higher form of sensibility has led me to make a study of the development of these sensory systems in the scale of evolution. In the lowest classes of vertebrates, in fishes, the system of vital sensibility is present. The posterior columns, however, are very small here and contain only fibers connecting the different levels of the spinal cord. They have no nuclei of Goll and Burdach and no frontal trigeminal nucleus. These animals have only this vital sensibility, which we may call the palaeotype of sensibility. As soon, however, in the scale of evolution, as life on land has become possible, new demands are made on sensibility. Thus a new pathway is formed. This is the system which we called above gnostic sensibility. In lower animals, for example, in reptiles and in birds, this second pathway is still small, but in the ascending scale it grows and is greatest in man. We called this the younger form of sensibility, the neosensibility. Investigations, made in co-operation with Doctor Zeehandelaar, taught that in the human development the same relation is seen. So it seemed correct that this neosensibility corresponds with the above mentioned higher form of sensibility. These recent investigations, however, have shown that the palaeosensibility does not remain the same during evolution. Just as is so often seen in the central nervous system, the old parts develop further and are more finely organized in higher animals and in men. The posterior horn of the spinal cord in reptiles and in birds is

of a much simpler build than in man, and the substantia gelatinosa Rolandi, for instance, is not present there (Ariens Kappers). Hence I believe it is not correct, at the present stage of science, to speak of a higher form of sensibility which is conducted in the posterior columns and of a lower form which is conducted in the anterolateral columns. In my opinion the chief difference between these two forms of sensory pathways is the following: The so-called vital sensibility is closely connected with autonomic functions, and, as I mentioned already, much of it is brought to the central nervous system by non-medullated fibers. At all events, it is associated in the gray substance with sympathetic centers and there causes, among other things, reflex movements in the sympathetic area. The other form of sensibility avoids the gray substance. It sends collaterals to this part of the spinal cord, but does not terminate there. These impulses sent in the direction of the cortex do not originate in the autonomic nervous system and are not associated with it. They should be called nonautonomic. The stimuli for vital sensibility cause on a high level of the brain sensory feelings. The nonautonomic system conduct impulses for gnostic sensory functions, which at a high level of the brain may cause sensory observations but no sensory feelings.

It is clear that both these forms of sensibility always work together in the cortex cerebri and that they constantly interact. It is this constant separate co-operation that enables us to form ideas of the outer world, insofar as this is possible by sensory stimuli.

It is clear that an exact knowledge of the organization of sensibility helps greatly to localize pathological processes in the brain and in the spinal cord. From all the clinical pathological syndromes, I shall take tumors of the spinal cords as an example, because these form a part of neurology, where biological research and practical application co-operate to obtain therapeutical results. These tumors of the spinal cord may cause disorders of motility, of sensibility, and of autonomic functions. The state of these disturbances depends on the level of the tumor in the spinal cord. Above all, the disturbances of sensibility enable us to localize the exact level of a tumor. The doctrine of the segmental anatomy has made it possible to do this. The part of the skin which is innervated by a segmental root is called a dermatome. There are several schemes indicating how these dermatomes are distributed. In Holland we always use Bolk's diagrams.

The principle of segmentation in the spinal cord is clearest in vital sensibility. In syringomyelia, for example, a disease in which a tumor chiefly grows in the gray substance, there are among other things analgesic areas in the skin, which may show the same form as the dermatomes.

There are also affections in which only gnostic, nonautonomic sensibility suffers. A good example of this is pernicious anemia. In the early stages of the disease we may see disturbances of deep sensibility and of finer touch in the legs, the other sensory functions being normal. In tumors which press on the outside of the spinal cord the disturbances

of sensibility vary greatly. To localize the exact level of the tumors we regularly use the schemes of the diagrams. So it seems to be simple to localize tumors of the spinal cord and to send them with a correct diagnosis to the surgeon. But experience teaches that this is not so easy. Not infrequently the spine is opened and no tumor is found. One of the chief causes of this is that there is an overlap between several dermatomes.

Diagnosing the exact level of tumors in the spinal cord has lately been greatly helped by the discovery of Sicard and Forestier. After suboccipital puncture lipiodol is injected and an ex-ray examination of the spine is made. Where an extra-medullary tumor is present; the lipiodol stops, gives a shadow on this part of the spine, and thus we are able to control our clinical conclusions. We have done much lipiodol work in my clinic. In 1925 tumors were successfully removed by the surgeon (Professor Lanz) after the clinical examination had been verified by lipiodol tests. In my opinion the lipiodol test must be done when the clinical examination has led to the diagnosis of a tumor of the spinal cord.

#### Demonstration of diagrams and slides.

### BIRTH INJURIES FROM AN OBSTETRIC STANDPOINT

By FREDERIC M. LOOMIS \*

*An editorial adviser in evaluating this paper for the editor states, in urging its acceptance and publication, that "it is one of the best essays on the subject that I have read. I only hope that all readers may get as much useful information from the printed copy as I received from reading the unusually clean and well-edited manuscript."*

*One of the discussants in a separate letter to the editor writes: "This article is interesting as well as instructive to me, and I believe that it is of the kind that helps to make CALIFORNIA AND WESTERN MEDICINE worth while.—EDITOR.*

*Intracranial hemorrhage is the most frequent birth injury, the most dangerous, and the least often diagnosed.*

*Premature infants, in spite of the greater ease of delivery, are much more subject to intracranial injury than those at full term.*

*Breech deliveries are, in proportion, much more likely to result in intracranial injury than vertex presentations.*

*A large proportion of intracranial injuries (up to 25 per cent) occur in normal deliveries.*

*Forceps deliveries are a large but uncertain factor.*

*The relation of mental defects in later life to injuries at birth is much argued but still unsettled.*

*DISCUSSION by Alfred Baker Spalding, San Francisco; L. A. Emge, San Francisco; Edgar Brigham, Dinuba, California.*

FORTUNATELY no one of us can relate as personal experience a very large number of definite birth injuries, and a presentation of the subject must necessarily consist largely of the findings of many. However, one cannot review recent work on this subject without being convinced that we have unconsciously made "asphyxia neonatorum" on death certificates cover so many things that the term is now no more accurate than is "heart failure" as a cause of death.

In England, Germany, and this country in the

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past three or four years very large statistics have appeared covering thousands of autopsies and scores of thousands of births. The outstanding facts are:

1. Intracranial hemorrhage is the most frequent birth injury, the most dangerous, and the least often diagnosed.
2. Premature infants, in spite of the greater ease of delivery, are much more subject to intracranial injury than those at full term.
3. Breech deliveries are, in proportion, much more likely to result in intracranial injury than vertex presentations.
4. A large proportion of intracranial injuries (up to 25 per cent) occur in normal deliveries.
5. Forceps deliveries are a large but uncertain factor.
6. The relation of mental defects in later life to injuries at birth is much argued but still unsettled.

In this country Ehrenfest (1922) in an exhaustive monograph first attempted to collect and interpret the facts, and has continued to draw attention to the importance of this subject. Fortunately for us he writes from the standpoint of the trained obstetrician, and I quote frequently from him. Sharpe, writing rather from the neurologic standpoint, has made important contributions, the most recent one covering four series, with one hundred consecutive births in each.

It will be remembered that the pia, the innermost meningeal layer, follows the contour of the brain substance closely; that the arachnoid covers the brain much more loosely; and that the dura is the heavy outside layer. The falx cerebri is the direct extension of the dura, dividing the two cerebral hemispheres, sickle-shaped, and itself dividing behind to form the tentorium—a broad shelf which separates the cerebrum and cerebellum. The juncture of the falx and tentorium is now accepted as the weakest point in this structure, and it is here that a large per cent of the injuries take place, the resulting hemorrhage coming from the veins along the free edges of the structures.

The "great adventure" of everyone's life is evidently at the moment of his entrance into it. If infant heads were not plastic, few first-borns would survive the passage through the pelvis, and we recognize moulding as a physiologic adaptation of the passenger to the passage. Moulding is made possible by the membranous sutures of the fetal skull, by the open fontanelles and by the overriding of the bones to permit the necessary shortening of diameters. However, lateral shortening of the fetal head is accompanied by longitudinal lengthening exactly as the long diameter of a toy balloon is increased by squeezing it laterally. It now seems that it is the specific function of the falx and tentorial fibers to prevent undue lengthening of the fetal head, and that forcible or more particularly sudden (this word is emphasized by nearly every writer) lateral compression, with its compensatory lengthening, beyond the margin of strength of these fibers, results in rupture and frequently though not always in hemorrhage. The other contributors to this symposium are to discuss the pathology, symptoms, and treatment of intracranial injury, but the obstetricians are primarily concerned in its mechanics from a standpoint of prevention. Holland in the British Medical Journal finds, from a large series of autopsies, that 51 per cent of fetal deaths result from complications of labor. We spend anxious months conserving the welfare of mother and fetus before delivery and then lose the baby in a moment of "de-

lirium operatorium," a clever phrase of DeLee's, which he describes as an "acute lapse of operative reason which may affect the accoucheur after much loss of sleep, the nervous wear of a prolonged labor, the exactions of the family, combined with the sudden appearance of extraordinary difficulties."

Writers are agreed that excessive moulding is the most frequent cause of intracranial injury, and it is constantly pointed out that increased intracranial pressure and intracranial congestion are attendant factors. It is believed that these conditions result in the depression of the respiratory center to such an extent that no amount of stimulation is effective. Every obstetrician knows that the newborn's heart frequently continues to beat for a long time even when there is no respiratory impulse whatever. I have long believed that "asphyxiated" babies were usually overstimulated, have long since abandoned the hot and cold tubs, vigorous slapping, etc., and have instead immediately put the child into hot blankets, cleared the throat with a tracheal catheter (which is easily made, like a wash bottle, and should be kept in every delivery-room) and have then kept up direct mouth-to-mouth inflation, through gauze, as long as necessary. The children we save in this way are suffering from respiratory depression rather than from hemorrhage. At this stage we have no way of diagnosing intracranial hemorrhage, as no one would consider doing a lumbar puncture in the first few moments of a child's life, and would in all probability increase the hemorrhage by relief from pressure if he did.

I am quite sure that we cannot influence the size of a child's head by the mother's diet during pregnancy, although I think we do succeed in lessening its total weight, and I am certain that by reducing her carbohydrate diet she will be in better condition to help us in her delivery and will be much more pleasing to herself and to her friends, with a reasonably good figure instead of a fat one, with the sagging and looseness of the skin that follows when the fat is finally reduced. We can, too, avoid some of our "impasses" by more careful judgment and measurements in the border-line pelvis, considering the father's stature as well as the mother's, and in particular watching for funnel pelvis. There are a surprising number of men who carefully measure the inlet, but neither measure nor estimate the outlet, and then find themselves with an almost impossible delivery so late in the second stage that they cannot consider Cesarean section, but must proceed with a difficult and forceful forceps delivery, with great damage to the mother and often the loss of the child. It frequently happens that we find the worst outlet contractions in women of the finest general physique, and yet this is what might be expected, since these women are structurally of the male type. These patients should be delivered through the abdomen, especially if they are past 30 or 35 and have the exceedingly heavy, unyielding masculine perineal muscles so common to their type. There has been so much criticism of the "epidemic of Cesareans" that it sometimes takes much courage to advise one, though in the light of our present knowledge of intracranial injuries it would be hard to devise a more severe test for a fetal head than a typical funnel pelvis.

The most common cause of pressure distortion of

the fetal head is posterior position. There are too many posteriors which do not rotate spontaneously, and we finally have a more or less exhausted patient, with diminishingly effective pains and no progress, and there are too many physicians still practicing obstetrics who meet this situation by "going after it" with nothing but a brave heart and a heavy hand. It is almost an insult to a group of medical readers to remind them that the pressure of extraction is greatly reduced by proper rotation; that the forceps handles should be so separated by a heavy sponge or towel that they cannot be squeezed, with consequent squeezing of the head; that forceps deliveries should be slow and deliberate, with a studied gentleness. But every one of these elemental principles is constantly violated. A multiplicity of remedies for a disease is clear evidence that no one has found the complete answer, and the number of papers written each year on the management of posterior positions is suggestive of a like predicament, not to mention those lofty souls who disdain any management except the selection of a solid place to brace their feet.

The Kjelland forceps will solve this problem to a large degree for some operators, version perhaps for a few, and manual rotation for others. For several years I have used manual rotation in difficult cases where interference seemed necessary—rotation of the entire fetus 180 degrees, not of the head alone. In this maneuver, with the patient fully anesthetized, the left hand, in right posteriors, is inserted past the fetal head till the middle finger reaches the child's right axilla, deeply posterior, the head being slightly displaced upward. With the help of the other hand on the outside, the entire fetus is rotated with surprising ease to an OLA position—not just to ORA, from which it is likely to slip back—and as the hand is withdrawn, firm pressure on the fundus by an assistant fixes the head in its new position firmly till mid-forceps can be applied. There are several objections to this proceeding, such as the invasion of the lower uterine segment by the hand and prolapse of the cord; but I have used it, after careful preparation, scores of times and have not yet regretted it. I am at least absolutely sure of the position of the head and of the correct position for the blades, and am conscious that the pressure is reduced to a minimum. I believe that under good hospital conditions and with due care, it is safer to risk thorough internal examination than to attempt a difficult delivery on the insecure diagnosis afforded by a short length of sagittal suture felt through a heavy caput, and a fontanelle that can be barely reached.

Recent reports of autopsies reveal a severe indictment of breech deliveries, or of versions followed by extraction. Holland reports tears of the septa formed by the dura in 81 out of 167 fetuses dying during labor; 35 of the 81 were breech or version cases. H. Saenger, in 100 autopsies of the newborn, reports 23 breech cases, and of these, 20 had tentorial tears and 22 had intracranial hemorrhage. Cruickshank reports autopsies on 400 newborn, 200 of which were at term and 200 premature. In 50 per cent of the mature infants and 40 per cent of the prematures there had been gross intracranial hemorrhage, but more surprising is the fact that

breech delivery had occurred in 47 per cent of the mature cases, and 52 per cent of the premature cases showing tentorial laceration. This can mean only one thing, i. e., that forced breech or hurried breech delivery is about the most dangerous known proceeding for the fetus. The extremely high percentage of tentorial tears and hemorrhage argues against simple asphyxia from compression of the cord as a cause of death in breech extraction, and consequently against the need of excessive haste in delivering the after-coming head. Whatever we may think of the Potter version as a routine, we must consider Doctor Potter with consistently warning against too much speed, and when we realize that the greater danger lies in the intracranial injury which is sure to follow force from below, we shall worry less perhaps about the time limit for compression of the cord. Thorough preparation of the vaginal floor or adequate episiotomy will protect us to a large extent against these dangers in our necessary breech deliveries, and careful consideration of possible flatness of the pelvis or of a high sacral promontory will help us avoid the tragedies of some of the elective ones. A minor point, but one worth remembering, is advanced by several German writers and reviewed by Ehrenfest in warning against bending the cervical and thoracic vertebral column backward in making traction on the after-coming head. It is pointed out that the natural attitude of the fetus is flexion and that the newborn vertebral column is better adapted to flexion than to extension; consequently, such traction as must be made should be made toward flexion instead of toward extension of the column, avoiding any attempt to "save the perineum" by bending the body of the fetus over the mother's abdomen.

I have left but little space for the better known birth injuries, such as facial and brachial paralysis, fractures and dislocations. These are not all due to the heavy hand of haste or inexperience, by any means, but sometimes occur in normal unaided deliveries, and in rare instances are justified if deliberately made. Excessive bending of the delivered head up or down to facilitate the delivery of a shoulder, hooking the finger in the axilla to pull down a shoulder forcibly, or into a bended elbow to bring down a forearm, pulling forward an arm by the hand instead of "splinting" it out by the finger of the operator pressing against it, lateral traction on the after-coming head, pressure of the fingers in the Smellie-Veit method into the space back of the clavicle traversed by the brachial plexus instead of bridging over or avoiding that area altogether—all these and many more we must keep in mind instinctively if we are to avoid injuries, but most of all we must be on our guard against the panic of the moment which impels needless hurry.

There will, I suppose, always be cases in which interference is not only justified but demanded by every consideration of humanity. The use of high forceps is fortunately almost obsolete, but mid and low forceps correctly decided upon and deliberately and skilfully used are operations of increasing safety as our hospital conditions improve, and the more we recognize the dangers of interference, and the more we learn how to avoid these dangers, the more true will become Barnes' epigram that we should

wait only to see what a woman can accomplish, not what she can endure.

#### DISCUSSION

**ALFRED BAKER SPALDING, M. D. (Stanford Hospital, San Francisco)**—Doctor Loomis has covered the subject of birth injuries from an obstetrical standpoint so well that in discussing his paper one finds very little to criticize and not much more to add. I agree with Loomis that we all have probably had more experience with birth injuries than we realize, unless routine autopsies have been made upon newborn babies dying from asphyxia. I thoroughly agree with Loomis that it is the sudden extraction or the sudden relaxation of pressure from the baby's head that usually causes damage. Such injuries may even occur with Cesarean section. With one of my patients suffering with fibroids of the uterus and eclampsia, the baby suffered from secondary asphyxia, and the autopsy showed hemorrhage of the brain.

I believe the more frequent use of the cervix bag will help in limiting the number of these injuries, as the cervix at times very tightly grips the baby's head, and probably constriction not infrequently results in birth injuries. Also I have found the Kjelland forceps seem to have been of distinct assistance in preventing cranial injuries associated with forceps delivery.

I finally wish to agree with Loomis that the more frequent resort to median episiotomy will probably lessen the number of cranial injuries.

**L. A. EMGE, M. D. (350 Post Street, San Francisco)**—Doctor Loomis deserves fulsome praise for this very timely and important discussion of birth injuries. I agree with Spalding that the salient points have been covered so well that little remains to be added. May I say that occiput posterior positions occur with much greater frequency than is generally believed. Only too often examinations during the first stage of labor are neglected or left to the unsuspecting intern. Consequently, many labors are unduly prolonged and recognition of the course is overlooked by virtue of nature's act in spontaneously rotating the head to a more favorable position. It is during this period of greatest pressure that cranial injuries take place. Since the event of Gwathmey's method of rectal anesthesia I have noticed that the conversion of posterior into anterior positions occurs more rapidly and with much less pain to the mother. Perhaps it is because the force and speed of uterine contractions are slowed up, dilatation of the cervix takes place more rapidly, and the posterior segment of the levator-ani muscles is less resistant. In any event, since I have employed this method of anesthesia I have been less often forced to resort to manual or instrumental rotation of the head. There is no doubt in my mind that the type of manual rotation practiced by Loomis is superior to the conventional method, because it prevents sudden torsion of the cervical spine and cord. I also agree with Spalding that the judicious use of cervix bags will greatly aid in preventing cervical injuries. May I say in concluding that I believe selective Cesarean section, especially the low type, is far more preferable to a breech extraction of a normal size baby through a mildly contracted pelvis, provided that the surgical technique of the attendant and proper hospital surroundings warrant such an undertaking.

**EDGAR BRIGHAM, M. D. (Dinuba, California)**—I am sure that one of the great causes of brain injuries during delivery is sudden compression on the head or sudden release of pressure. This applies to spontaneous as well as to all forms of artificial deliveries. In some women who have spasmodic, almost overwhelming, pains, I believe it is very important to enlist their co-operation in regulating the voluntary force, aiding them with sufficient anesthetic.

As stated by Emge, I find that the synergistic method of analgesia is a decided aid in converting a posterior to an anterior position. In difficult cases the manual rotation as practiced and described by Loomis should do all he claims.

Recently I delivered a small mother whose measurements, both inlet and outlet, were on the extreme border line. Great care was used in applying median forceps

(axis-traction type), and the pressure was applied and released gradually in simulating labor efforts. By doing an episiotomy the child was delivered from a ROP position without internal or external head injuries. With Emge, however, I believe that Caesarean section is the safest for the child and less traumatizing to the mother in posterior positions coupled with moderate contraction of the pelvis.

Doctor Loomis has presented this subject in a very interesting and thought-provoking manner. His contribution should spur us to closer observation and more careful technique in preventing birth injuries.

#### RECURRENT TOXEMIA OF PREGNANCY

By HANS VON GELDERN \*

*A large proportion of pregnancy toxemias recur in subsequent pregnancies, and over one-fourth of these are complicated by chronic nephritis.*

*It is essential to segregate the chronic nephritic patients from this group because they invariably have a poor prognosis.*

*Kidney function tests will aid not only in making this differentiation, but will assist in determining the prognosis in future pregnancies.*

*The ultimate outcome of the patients with recurrent toxemias is doubtful, but carefully planned prenatal care, with the aid of kidney function tests and good judgment as to the time to terminate pregnancy, will carry through at least 75 per cent satisfactorily.*

*The urgent need of systematic follow-up work between pregnancies is recognized.*

DISCUSSION by Frank Ainley, Los Angeles; Alfred B. Spalding, San Francisco.

**A**FTER recovery from a severe toxemia the question is raised whether it will recur in the event of a future pregnancy. Lepage, in a series of thirty-eight hospital patients suffering from toxemia of pregnancy, found that 21 per cent had recurrences in subsequent pregnancies. Records of the toxemias at the Johns Hopkins Hospital show about the same percentage.

Slemons reported eighteen private patients who had subsequent pregnancies, only three of whom had toxemia with each pregnancy, while the others showed no further evidence of toxemia. From observations made upon toxic patients with albuminuria, Slemons concluded that a reduction of albumin to a faint trace, in the course of a week following delivery, was to be regarded as a favorable prognostic indication, while a measurable amount, persisting over six to eight weeks, was evidence of damaged kidneys and an unfavorable sign for future pregnancies. An albuminuria lasting over a period of three to four weeks he regarded as a more doubtful prognostic sign. In studying the blood pressure in twenty patients, Slemons and Goldsborough found that in 75 per cent the blood pressure was normal in two weeks, indicating that no renal lesion was present, whereas in 15 per cent, clinically diagnosed as nephritis, hypertension lasted eight weeks post-partum. In two patients, or 10 per cent, the blood pressure remained elevated for one month, indicating a doubtful prognosis.

Bunzel, by means of a "Toxic Follow-Up Clinic," interviewed sixty patients who were either pregnant when seen or had been pregnant since their discharge from the hospital. Thirty-one of these

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again showed signs of toxemia, while twenty-nine did not.

Harris had the opportunity to follow up 111 patients admitted to the obstetrical service of the Johns Hopkins Hospital. Each patient returned after one year, and was studied with particular reference to the existence of renal disease. He classified the toxemias in his series into four groups, namely, eclampsia, pre-eclamptic toxemia, nephritic toxemia with convulsions, and nephritic toxemia without convulsions. Eleven per cent of the eclamptic patients who returned for study showed evidence of chronic nephritis, and about 7½ per cent had subsequent pregnancies complicated by nephritis. Harris concluded that in these patients chronic nephritis developed following eclampsia and probably resulted from it. In no subsequent pregnancy of this group did the symptoms of eclampsia reappear. Sixty per cent of the pre-eclamptic patients who returned showed evidence of chronic nephritis, nephritic toxemia occurring in all subsequent pregnancies. Those patients who were normal at the end of one year showed no evidence of toxemia in subsequent pregnancies. These facts tend to indicate that the ultimate outcome in patients recovering from eclampsia is more favorable than in pre-eclamptic toxemia, a condition which Harris is unable to explain. Many of these so-called pre-eclamptic patients must evidently have belonged to a mild or unrecognized chronic nephritic group before the onset of pregnancy. All of the members of the nephritic groups having subsequent pregnancies had nephritic toxemia. The time of onset in Harris' series is significant. In the eclamptic group the average onset was one week prior to delivery, in the pre-eclamptic patients one month, while in the nephritic groups symptoms began before the last month of pregnancy. This would indicate that the length of time the toxemic symptoms have persisted is a factor in determining the presence of permanent kidney damage and gives us a clue as to the ultimate prognosis.

Kellogg noted observations derived from 400 consecutive toxemia records of the Boston Lying-in Hospital, from forty-one private patients and from autopsies. He noticed that there was a great group of patients who, though showing no clinical manifestations of chronic nephritis when not pregnant, nevertheless in subsequent pregnancies showed evidence of kidney insufficiency or toxic symptoms, and to this group he tentatively gave the name "recurrent toxemia of pregnancy." Members of this group have undoubtedly been classed by various observers among the nephritic toxemias. By instituting thorough prenatal care, Kellogg was able to carry patients in this class through their pregnancies without showing signs of kidney insufficiency. However, there were certain of these patients in whom, in spite of the best possible prenatal care, toxemia occurred and persisted. Kellogg considered recurrent toxemia as a clinical entity, further basing his idea on the autopsy findings of two cases who showed the acute kidney lesions of toxemia of pregnancy. These observations and results brought about the establishment of a system by which each patient would be thoroughly investigated and placed into one of three groups: (1) chronic nephritis complicating pregnancy; (2) recurrent toxemia of pregnancy; and

(3) acute toxemia of pregnancy. With this idea in view a definite scheme for the study of toxemia patients was established in the form of a postnatal clinic and with an adequate follow-up system. In the course of the investigation, liver function tests, blood chemistry and phthalein tests are done and the eye grounds are examined. These tests are repeated postpartum to establish the diagnosis. The cases are then grouped in a toxemic index for future reference.

This is a great step in advance and will ultimately place the diagnosis and treatment of the late toxemias of pregnancies on a satisfactory basis, providing for a more intelligent and favorable prognosis. Similar procedures have been inaugurated in the Stanford Women's Clinic, and it is hoped that in time valuable information will be obtained. Of our 3338 confinements there were 135, or about 4 per cent of patients, whose symptoms, blood pressure determinations and laboratory findings were such as to class them in the group of toxemia of pregnancy. Owing to the fact that these records extend over a period of several years, that the observations were made by various attending physicians, many only temporarily connected with the obstetrical department, and that, although a large amount of social service work has been carried on for years, no systematic follow-up of the toxemic patients has been attempted until recently, the data concerning these patients are far from complete.

Our follow-up records show that twenty-seven toxic patients have had subsequent pregnancies, of whom thirteen had one or more normal pregnancies following the toxic one. The fourteen patients who showed recurrent toxemia had sixty-one pregnancies, of which thirty-eight pregnancies were complicated by toxemia. Twenty-five patients of 135 had convulsions. Twenty-one of these were primiparas and four were multiparas; two had spontaneous abortions following their eclamptic pregnancy; one had eclampsia followed by two normal pregnancies; while three had one or more toxic pregnancies following the one complicated by eclampsia. However, no patients in this series had recurrent eclampsia. In the eclampsia patients the maternal mortality was 16 per cent. The fetal mortality was 20 per cent, 12 per cent occurring in patients with recurrent toxemia.

The group of fourteen patients having recurrent toxemia was studied with respect to the character, onset and duration of symptoms in each pregnancy, antepartum and postpartum findings on urinalysis, antepartum and postpartum blood pressure readings, and to the results of certain kidney function tests. The special tests used in the diagnosis were the phenolsulphonphthalein test, blood urea, and the determination of the percentage of normal kidney function as figured from a method developed by Addis. This method is based on the observation that under certain special conditions the function of the kidney is limited by, and becomes a measure of, the quantity of effective tissue it contains. Under these conditions experiments have proved that the ratio

urea in 100 cc. blood equals the amount of effective renal tissue. The average ratio in normal adult males was found to be 50.4, which is the accepted standard to represent 100 per cent normal renal

function. Spalding, Shevky, and Addis applied this test to a series of pregnancy patients both toxic and nontoxic, and figured the renal capacity of each patient with respect to the per cent of normal average ratio. The normal pregnancy patients showed an average of 106 per cent of normal ratio, while the toxic patients showed in general variable percentages below 100 per cent. These observers supplemented the test by a careful study of the urinary sediment, which indicates whether the kidney lesion is in the main inflammatory, degenerative or atrophic. They concluded that the danger lies not in the extent of the renal lesion during the acute toxemia, but in the fact that it may fail to heal and may become a continuing and self-perpetuating disease which either alone or with the help of a complicating arterial disease may ultimately lead to the death of the patient in uremia. Our toxic follow-up work now includes for each patient several complete kidney function tests as above mentioned and, although the results are not yet completed, this promises to be of great prognostic value in recurrent toxemia.

Applying the above methods of diagnosis to fourteen patients who had toxic recurrences, it was found that four patients, or about 28 per cent, either had or developed in the course of their pregnancies chronic nephritis, while ten patients with recurrent toxemia had no demonstrable kidney lesions. The four patients with chronic nephritis had interesting obstetrical findings. The first had four toxic pregnancies, death following hysterotomy at nineteen weeks because of chronic nephritis. The second had three toxic pregnancies and showed a deficient kidney function before the last delivery. On examination two years later she showed a heavy cloud of albumin and a blood pressure of 230 systolic and 150 diastolic. In each pregnancy the symptoms were progressively more severe and appeared earlier. The third patient had four toxic pregnancies and showed deficient kidney function both before and after the delivery of her third baby at term. Her fourth toxic pregnancy was terminated by Caesarean section, and sterilization was done to protect her kidneys. The fourth patient was delivered by Porro Caesarean section in the eighth month of her second toxic pregnancy. Her blood pressure was 270 systolic and 150 diastolic, and the urine showed a heavy cloud of albumin, hyalin, and granular casts. Four years later the blood pressure was 236 systolic and 136 diastolic. These four patients bring out the following points: that in chronic nephritis complicating pregnancy there is a relatively early onset of symptoms, earlier with each succeeding pregnancy; persistence of pathologic changes in the urinary organs over a period of months following delivery and often never completely clearing up; a hypertension of marked degree, persisting and increasing in spite of extensive prenatal care; and a deficient kidney function.

We meet another difficult problem when considering the group of recurrent toxemia patients without evident permanent kidney damage, because the prognosis is doubtful. Ten patients were placed in this group for the following reasons: (1) relatively late onset of symptoms, with a variable but usually earlier onset in subsequent pregnancies; (2) relatively late and sudden onset of pathological disturb-

ances of the urinary organs; (3) rapid clearing up of the urine postpartum; (4) late development of hypertension with a rapid return to normal level; and (5) a normal or somewhat impaired renal function showing improvement after delivery.

Seven of these patients, with the aid of watchful prenatal care, were carried through their last toxic pregnancies and labors satisfactorily. Two patients were delivered at term, one spontaneously and one by version and breech extraction. In five patients pregnancy was terminated in the ninth month because of the severity of their symptoms. Three had labor induced and were delivered by version and breech extraction, and two were delivered by Caesarean section and were sterilized.

The other three patients had a less fortunate outcome. The first patient had her first baby prematurely by Caesarean section for eclampsia. Three years later she was delivered prematurely of a macerated fetus, low forceps being used in the second stage. The following year a Porro Caesarean section was done for placenta ablatio, and the fetus was stillborn. However, kidney function tests showed no impairment of renal function, and her symptoms cleared up rapidly between pregnancies. The second patient had one therapeutic abortion for hyperemesis. Her second pregnancy was terminated by Porro Caesarean section at six months because of severe toxemia, which began soon after conception and became progressively worse. She and the baby died within one day after the operation. Autopsy showed extensive necrosis of the liver and kidneys. The third patient was delivered by Caesarean section for severe toxemia accompanied by coma. After the operation she became delirious, but her symptoms finally cleared up and within two weeks the urine was negative and the blood pressure normal. Two years later she developed eclampsia in the seventh month and died a few hours after a Caesarean section. The baby lived one month. These last records show that with the ordinary clinical means it is difficult and often impossible to determine which patients in this group can be carried through their pregnancies without endangering their lives.

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#### DISCUSSION

FRANK C. AINLEY, M. D. (1136 West Sixth Street, Los Angeles)—Those patients in whom nephritic toxemia exists during successive pregnancies, and those in whom an eclamptic toxemia appears with the first pregnancy and nephritic toxemia appears during subsequent pregnancies, offer little difficulty, but whether or not it will be found that there is such a thing as "recurrent toxemia of preg-

nancy" as an entity will depend upon a more extensive knowledge of the biochemistry of the pregnant woman than exists at the present time.

A recent patient under my care is of particular interest. She was observed during three pregnancies and deliveries. In all of the pregnancies she showed evidence of toxemia, with no evidence of kidney insufficiency after the first or second. Late in the third pregnancy she developed convulsions and died shortly after delivery. At autopsy the kidneys were found to be quite normal, but the liver showed the hemorrhagic lesions characteristic of eclampsia. The findings suggest the possibility that an eclamptic toxemia might have been present in three successive pregnancies without producing chronic kidney change, or there still remains the possibility that the first and second pregnancies were associated with some other form or forms of toxemia neither eclamptic nor nephritic, but of some type which will only be understood when our knowledge of the chemical processes in the body of the pregnant woman are more thoroughly understood.

The infinite number of biochemical variations possible during pregnancy which might result in an intoxication of the patient would seem to make it probable that there may be a number of different toxemias, of which eclampsia, with its specific pathological lesions in the liver, is only one example, and it is conceivable that a patient might experience a different toxemia with each of successive pregnancies, none of which necessarily showing marked or permanent kidney symptoms.

**ALFRED B. SPALDING, M. D.** (Stanford Hospital, San Francisco)—Doctor von Geldern is to be congratulated for presenting so clearly a survey of the American literature in regard to clinical observations so far made in a few clinics on recurrent toxemias of pregnancy. I would like to emphasize the difficulties that are met with in successfully conducting a follow-up clinic for pregnancy patients. Because of the expense associated with such work, only a few clinics can even partially carry on this work. I think here is where some good work can be done by public health nurses to help private doctors to educate their patients to the needs of study after a toxic pregnancy. While we know very little about toxemias of pregnancy, it seems justifiable to agree with Von Geldern that a considerable number of pregnancy toxemias recur in subsequent pregnancies and that many of these are complicated by chronic nephritis. I would like to emphasize the prognostic value of quantitative renal function tests such as have been conducted at Stanford University School of Medicine for a number of years by Thomas Addis. With a kidney function test normal a year after delivery, it is justifiable to advise such a patient to again attempt pregnancy, provided she can have careful prenatal care. Where the late kidney function test shows persistence of kidney damage, the prognosis of future pregnancies is very grave.

**Many doctors think that they lose patrons by adopting business methods in the collection of bills for professional services rendered.** As a matter of fact the contrary is the case. Prompt payment makes friends, and slow payment often makes enemies. Seldom, if ever, does a reputable doctor fail to extend appropriate leniency to the deserving poor, but there are very few people who cannot afford to pay something, be the amount ever so small. It would be far better for those in moderate circumstances, if their self-respect is to be preserved, if given an opportunity to pay within their means.—J. Indiana M. A.

**Educators are quite generally agreed these days that health should be given most importance in the school curriculum.** At the same time some of them point out that health is something we cannot define. In a way health cannot be defined, but neither can we define life, and we are constantly revising our notions about such fundamental phenomena as matter and energy. Even when we work out our definition of health it does not apply specifically as does a definition of electricity or of ether, for the health of one person is by no means the health of another.—M. J. and Record.

## ANTI-SCIENTIFIC PROPAGANDA

By PETER FRANDSEN \*

THIS country seems to be especially favored in the development of all sorts of pseudo-scientific cults and anti societies. The anti-vivisectionists have been with us for a long time, but lately their strength, or at least their noise, has been increasing. The anti-vaccinationists seem to be getting more noisy, and they have succeeded in overturning legislation designed to control the spread of smallpox in several states. In Minnesota, since 1903, they have prevented the enactment of contagious disease control legislation. It is not surprising then that that state should have a record of 9000 cases of smallpox in 1921. Massachusetts, with a compulsory vaccination law, has not had more than forty cases annually since 1917. California repealed its compulsory vaccination law, and had over 5000 cases that year. Connecticut, Montana and other states have weakened their state laws because of the influence of the anti-vaccinationists. Is it any wonder that smallpox is one thousand times more prevalent in Montana than in Massachusetts in proportion to population, and that the rate in California is fourteen times as great as it is in Japan?

Pseudo and unscientific cults are springing up and finding it easy to get a hold on the popular mind, and are making some headway in establishing themselves on an equally recognized basis with scientific medicine. The legislature of West Virginia in 1925 passed an act recognizing naturopathy and chiropractic as accredited forms of healing. In most states, religious healers, neuropaths, psychopaths, herbalists, food fad healers, as well as osteopaths and chiropractors, find little difficulty in practicing on patients for all sorts of human ailments. While all these antis differ in their origin and propaganda, they are alike in that they are an attack upon the scientific methods not alone in medicine but in all fields of knowledge. The anti-evolutionists have at least made a fair start, and what they may yet accomplish in legislation affecting the teaching of theories based upon scientifically observed facts remains to be seen. This movement may easily extend itself to other matters than the question of man's origin.

What are the reasons for all this anti propaganda and its success? How may its capacities for harm be counteracted? are questions that call for an answer from those trained in scientific methods. Some of the propagandists are fanatics whom we will always have with us, but a substantial percentage of their followers are intelligent men and women. Some have an exaggerated notion of what they call personal liberty and the right to their own beliefs; others are sentimentalists in their attitude toward animal life as compared with human life. The new schools of healing find a listening ear in their appeals to prejudice and ignorance, the human love

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of the mysterious, their deliberate misrepresentation of the facts and their clever advertising methods. When forced to defend their positions they point to medical and scientific mistakes of the past. Bleeding was once a universal medical practice, malaria was thought to be caused by bad air. The germ theory of disease is just another guess; vaccination and serums are only a present-day fad. Such is the gist of their argument. I suppose a majority of our scientifically trained physicians of today will agree with Hippocrates in his estimate that seven out of every ten patients who recover would recover without any special treatment. Therefore, the most that any form of treatment can claim is 30 per cent of the cures effected. The other 70 per cent can be accredited to whatever cults are smart enough to catch the patient's fancy. Since many recoveries are slow, and humanity impatient, some of the 30 per cent may give the credit to one of the quacks they may consult after the educated doctor appears to have failed.

No scientist believes that the knowledge he possesses is complete. He knows that present-day theories and practices may have to be changed in the light of new truths discovered tomorrow. What he does have lasting faith in is the scientific method which bases its practice on the most painstaking observation re-enforced by carefully controlled and rigidly analyzed experiment. The pseudo-scientific guesser creates a plausible theory out of gossamer stuff undisturbed by any facts, and relies for his arguments on superficial analogies or some mystical belief. Until recently the scientific worker has not troubled himself much about this popular propaganda. He has assumed that the facts would eventually speak for themselves. But sometimes good causes may fail or be seriously crippled for lack of aggressive championing, and it was the realization of this fact that led to the organization of the American Association for Medical Progress.

In November, 1921, the New England Anti-Vivisection Society held a convention in Boston. There was a large attendance of interested people. Many of them were startled when they were told that research institutions like the Rockefeller Foundation were only worthless establishments for practicing cruelties on helpless animals; that men known to and respected by the audience were monsters of cruelty; that modern methods of curing and preventing disease were only means to fill the pocketbooks of an organized medical trust. Speakers told them that vaccination was the pouring of diseased pus from a sick cow into the child's blood. So vicious was the propaganda, that a group of the attending laymen were aroused to organize for the purpose of combating the promulgation of these and other untruths. It was first called the Society of Friends of Medical Progress, became active in 1923, and in 1924 changed its name to The American Association for Medical Progress.

The purpose of the organization is to inform the public of the truth regarding the value of scientific methods of research to human and animal welfare; to combat legislation dangerous to health; to aid in securing desirable legislation; to see to it that high

standards for the practice of the healing art are adopted and enforced in order to protect the ignorant and helpless from the predatory quack and impostor. In the two years of its existence this association has published many well-written pamphlets, and has had representatives at conventions and public gatherings in many states. Why should a lay organization take the promotion of medical progress upon its shoulders? Why should not the medical profession be organized for this purpose? If it did so the anti-propagandists would foster the public suspicion that it was inspired by selfish motives and was seeking to make its own stronghold impregnable. Such a charge cannot be as effectively brought against a lay organization. Moreover the informed layman has the chief responsibility in the matter because it is he and his family that will have to suffer if medical progress is impeded, and it is the public that will have to pay the bills.

Needless to say, the society asks and needs the co-operation of practicing physicians and other scientists in arresting these destructive anti-forces. Much can be done in the schools to educate the younger generation, but there will always be a large section of the public, reachable only through the public press, public gatherings, and the individual contacts between physician and patient. To what extent can the medical profession aid in safeguarding the scientific method?

One of the reasons the antis are so successful is that they talk in a language the man on the street can easily understand. The charlatan has a simple, plausible explanation for things that are not so easily explained in a scientifically accurate way. Most of the common people look upon the doctor with awe mingled with fear. He is a man of mysterious knowledge and possesses a power beyond their comprehension. Unfortunately there is a temptation to foster this attitude on the part of some by employing highly technical terms in dealing with patients and relatives. The Latin prescription helps to mystify still more. Is it any wonder that the puzzled patient becomes interested in the simpler explanation of the pseudo-scientist or that he can be made to believe that technical descriptions and Latin prescriptions are a device to conceal ignorance, as they sometimes may be?

The average person, in things medical, is like a little child in his first questions about the world in which he lives. He asks his elders puzzling questions. The shortest way out is to tell him that he is too little and too ignorant to understand. The second way is to invent some simple fairy tale explanation, such as the stork bringing the baby down from heaven. This satisfies for a time, but the deception may destroy confidence later on. If we try to tell the child the whole truth we bewilder him and he will not ask again. The hardest but best plan is to answer him truthfully, without concealment, in the simplest terms, and to go no deeper into the subject than will satisfy his immediate needs. The relations between doctor and patient would certainly be strengthened if the former would make himself a good teacher. By taking pains to explain the principal facts, by helping the patient

to follow his own reasoning, by pointing out the possibilities for harm, especially in imperfectly developed new lines of treatment, he may save the patient from the clutches of the modern quack who advertises serums and gland preparations as cure-alls.

In times of epidemics, well-written accounts of the situation, with suggestions and advice to the public such as the Nevada Hygienic Laboratory has been putting out during the past year, will do much in answering questions and creating confidence. Health meetings, with addresses in nontechnical terms by competent speakers, also are of recognized value in educating the public. Would it not be a good plan for the local and state medical societies to regularly have some one of their meetings especially arranged for the public? At such a meeting the progress of medicine could be presented in such a way as to make many new friends to the cause of medical progress. In short, the more scientific men can take the public into their confidence, and the less they shroud their activities in a veil of technicality or aristocratic seclusion, the better it will be for the safety of scientific methods and the welfare of the race.

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To the steadily increasing number of pharmacists who are handling biologics, and who realize the rapid growth of the tendency of the medical profession to employ these therapeutic agents in their practice, the announcement that the United States Public Health Service has issued to E. R. Squibb & Sons the first license ever granted for the manufacture and sale of Erysipelas Antitoxin is of the utmost importance. The fact that approximately 3000 deaths are caused annually by erysipelas and that thousands of other cases are under treatment emphasizes the vital importance of Erysipelas Antitoxin (Squibb) as a scientific attainment and as an ally in offsetting the ravages of this dread disease. From a commercial viewpoint the offering of this new antitoxin affords the pharmacist additional opportunity to co-operate with his physicians and to develop his business along strictly professional lines and in a highly profitable manner. Erysipelas Antitoxin (Squibb) is marketed under an exclusive license from the School of Medicine and Dentistry of the University of Rochester, Rochester, New York, and is prepared according to the principles developed by Dr. Konrad E. Birkhaug of that institution. The license provides, among other things, that samples of each lot of Erysipelas Antitoxin (Squibb) must be submitted to the University of Rochester for test and approval before distribution. This control is in addition to that made in the Squibb Biological Laboratories and constitutes an added guarantee of the potency of the antitoxin. The control by a laboratory outside of the Squibb organization is of particular importance in the case of Erysipelas Antitoxin because the Hygienic Laboratory of the United States Public Health Service has not established any standard of potency and does not recognize "units" of potency. Erysipelas Antitoxin (Squibb) is supplied in concentrated form only, and will be distributed only in syringe packages, containing one average "Therapeutic Dose."

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Is it not stimulating to us who are interested in hospitals as instruments for the furtherance of human welfare that these institutions are now permitted to share in the great advances that are being made and that are likely to be made in the future? Until recent years, while the hospitals were appreciative of the contributions which their physicians made to medical progress, yet, as organized institutions, the hospitals themselves played little part in these advances; but now they stand beside the universities and the scientific institutes in educating physicians and in advancing medical science.—Rufus Cole, Science, August 6, 1926.

## RECENT STUDIES IN SCARLET FEVER

By EMIL BOGEN \*

(From the Contagious Division Service, Los Angeles General Hospital)

The modern conception of scarlet fever is that it is an acute infectious disease caused by certain strains of the streptococcus hemolyticus. The usual site of the infection is in the nasopharynx, but it may find entry also through wounds or other portals, and may become secondarily localized in the glands, ears, kidneys, or other organs. It is characterized partly by the symptoms produced by the local infection, but especially by the general systemic effects produced by the circulating soluble toxin, which is generated by the organisms at the local site of infection and disseminated through the blood stream to all parts of the body. It is the toxin that gives rise to the exanthem, the fever, the toxemia, and the other general symptoms of scarlet fever. Antitoxins are produced in the body of the patient, which can entirely neutralize the effect of the toxin and thus produce a permanent immunity to reinfection with scarlet fever. About two-thirds of the population not previously attacked by scarlet fever contain such antitoxin in their tissues. Its presence or absence can be detected by means of the Dick test. The toxin can be neutralized locally, as in the Schultz-Charlton test, or systemically, as in the serum therapy of scarlet fever, by the injection of antitoxin secured from convalescent patients or from horses immunized according to the methods of Moser, Dochez or Dick, but we are unable as yet to prevent the development of complications. Active immunization by means of vaccines and toxins is being attempted, but so far has not been an unqualified success. Our experiences at the Los Angeles General Hospital have been in complete accord with this conception, and lead us to expect that it will not be long before scarlet fever may be completely brought under control.

DISCUSSION BY J. E. MCKILLOP, OSCAR REISS, J. D. DUNSHEE, ROGERS F. WAKEFIELD, LOS ANGELES.

SINCE 1885, when Klein described the streptococcus scarlatinæ as the cause of scarlet fever, hemolytic streptococci have been frequently found in the nasopharynx; in the blood and urine and in the discharge from the ears of patients suffering from scarlet fever. These bacteria have also been found in local wounds in wound scarlet; in infected burns in burn scarlet; in the lochial discharge in puerperal scarlet; in the milk in a milk-borne epidemic, and in every possible relationship to this disease. Yet only three years ago Hektoen showed in an exhaustive historical survey that Koch's third postulate had not yet been met by the experimental production of scarlet fever in man or in animals by the inoculation with a pure culture of streptococci. Moreover, the work of the Italian investigators, Caronia, Di Christina, Sindoni, Vitelli, Ritossa, and others during the past few years pointed almost as clearly to an anaerobic diplococcus as the cause of this disease.

At last, after a series of brilliantly persistent studies extending in unbroken line for over a decade, George F. and Gladys H. Dick of Chicago in 1923 succeeded in producing typical scarlet fever in a number of human subjects by inoculations with cultures of a specific strain of hemolytic streptococci isolated from a scarlet fever patient. They then developed a method for testing the susceptibility of an individual to scarlet fever, thus furnishing an explanation to the failures of so many previous at-

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tempts to produce the disease experimentally. Later they prepared an antitoxic serum that can neutralize the scarlet fever toxin and cause a disappearance of the rash, and finally a preventive toxin mixture that may produce immunity from the disease in individuals previously susceptible to it.

Nor have the reports of the Dicks been without confirmation and corroboration. Careful to a fault, and slow to publish any of their work until it had been well established at every step, their published results were met by those of Dochez, Blake, Zingher, and many other writers, who, working independently, with the aid of the discoveries previously published, were arriving at the same wonderful results. And so used is the public to the idea of a great discovery in modern medicine that the first articles were hardly off the press than commercial houses were avidly striving to produce the desired sera, toxins and vaccines. Naturally, in the face of such wonderful discoveries, hopes ran high, and imagination was difficult to restrain, and so many workers have felt some disappointment as the earlier expectations were curtailed in the face of the facts as actually developed. There has been such a striking unanimity of reports from so many different workers, working on such a large scale, however, that it is already possible, less than three years since the revelations of their first successful human experiments by the Dicks, to gather a fairly well-supported idea of the nature, cause, and immunogenic factors in scarlet fever, and to place considerable reliance upon the methods and materials recommended for dealing with this disease.

The Dick test, which forms the basis upon which our entire conception of scarlet fever has been reconstructed, is a method for the determination of the susceptibility of an individual to this disease similar to the well-known Schick test in diphtheria. To perform the Dick test one-tenth of a cubic centimeter of a known standardized solution of toxin, obtained from the condensation water of a culture of the hemolytic streptococcus derived from a case of scarlet fever, is injected intracutaneously, with a known inert control to rule out simple skin hypersensitization reactions. A positive test, representing susceptibility to scarlet fever, manifests itself in the absence of sufficient antibodies to neutralize this toxin by the formation of an erythematous reaction, producing a reddened area around the point of injection. It develops in the course of about twelve hours and persists for a day or two. The appearance of a reddened area at the point where the toxin was injected, with the absence of any reaction to the control, is conclusive evidence of the susceptibility of the individual to scarlet fever, while the absence of such a reaction evidences immunity to the disease. The considerable data which has been accumulated indicates that about 40 per cent of the general population who have never had scarlet fever are susceptible to it; that almost every scarlet fever patient has a positive Dick test at the onset which disappears and is replaced by a negative Dick test during the course of the disease; that almost all persons who have ever had scarlet fever manifest immunity by negative Dick tests.

During the past year over 300 Dick tests were performed at the Los Angeles General Hospital

with the aid of Doctor Dunshee of the City Health Department.

Of the 300 tests 78 were positive and 222 were negative. Of 153 of these patients who had never had scarlet fever 47 showed a positive test, or 30 per cent. Of 115 who were in the hospital for scarlet fever, 29 gave a positive test, or 25 per cent; while of 32 who stated that they had previously had scarlet fever, only two, or 6 per cent (both nurses), gave a positive reaction. It is worthy of note that all of the cases of erysipelas tested, eleven in number, gave a negative reaction. This is a very small group, but is suggestive of the possibility that infection with other strains of hemolytic streptococci may aid in the production of some degree of nonspecific immunity to scarlet fever. These figures tally fairly closely with those published from other sources, and give a fair picture of the relative immunity in the various groups. As Zingher has shown, the proportion of positive tests diminishes with advancing age, and in general keeps a fairly constant relationship to the number of positive Schick tests in the same group.

TABLE ONE

	Dick Positive	Dick Negative	Total
Patients with scarlet fever.....	29	86	115
Patients who have had scarlet fever .....	2	30	32
Patients who have not had scarlet fever .....	47	106	153
Total .....	78	222	300

The blanching test of Schultz and Charlton, introduced only a half-dozen years ago, is based upon the observation that if a small amount of serum from a convalescent patient, or in fact any serum containing antibodies against the scarlet fever toxin, is introduced into the midst of an area of scarlet fever erythema, it will, by neutralizing the toxin present, cause a disappearance of the erythema at that spot, giving a sharply defined characteristic blanching of the rash. If, however, the erythema is due to any other cause than the specific toxin of the scarlet fever streptococcus this blanching will not occur. This is a very valuable method for the differentiation of scarlet fever from rashes of other origin which might be confused with it. About thirty such tests were performed at the General Hospital during the past year, and in certain cases the reactions were of real aid in arriving at the diagnosis. Serum from convalescent scarlet fever patients, or more conveniently horse sera prepared after the methods of Dick or Dochez, may be used. This test can only be applied during the height of the rash, and cannot be read if the rash has disappeared, but the definiteness and prominence of the blanching is of great value and conviction when it is noted, lasting sometimes for days, until the rash has disappeared.

Convalescent serum from scarlet fever patients has been used to prevent and especially to treat this disease for many years, but the difficulty in procuring the serum and the uncertainty as to its strength has militated against its more widespread use. The sera prepared by Moser in 1902 and the antistreptococcal sera of Marmorek have still some

adherents in this country, but it is only since the introduction of the methods of Dochez and Dick that immune horse serum against scarlet fever has been produced on a large scale. It must be recognized that so far these sera appear to be mainly antitoxic, capable of neutralizing the toxin in the blood and tissues of the patient, but possessing little or no effect upon the organisms producing that toxin. It has been quite generally found that the intramuscular injection of these sera results in a marked and almost immediate drop in the fever, accompanied by disappearance of the rash and other signs of the general toxemia of scarlet fever, but there is still conflicting evidence as to its value in reducing the incidence of the much-dreaded complications and sequelae of this disease. The high incidence of serum reactions from the crude preparations so far available also militates against its wider use, as well as the comparative costliness of the sera.

Of twenty-five patients who received injections of antitoxic horse serum at the Los Angeles General Hospital, representing only the more seriously ill among our scarlet fever patients, fifteen showed an immediate and marked drop in the fever and other toxic symptoms. Most of the other ten showed signs of already developing complications, which seemed to be unaffected by the serum treatment. These included purulent otitis media in five patients and suppurative adenitis in three others. Eight of the twenty-five patients developed marked serum sickness, which was remarkable in that it came on within a day or two after the administration of the serum instead of the customary eight to twelve days later.

diphtheria is ineffective in scarlet fever. The immunity thus conferred is shortlived and unreliable. Attempts to increase the efficacy of vaccines by the addition of the dead streptococci are being continued, but so far have not been an unqualified success. We used the method of injecting large doses of toxin on twelve employees at the hospital, but abandoned it after one of them, who had previously had a strongly positive Dick test, contracted a mild case of scarlet fever six weeks after a series of injections with the supposedly immunizing doses of toxin. Attempts with the newer and more potent vaccines are still in progress.

#### DISCUSSION

J. E. MCKILLOP, M. D. (Garland Building, 740 South Broadway, Los Angeles)—Studies in scarlet fever are particularly timely at this time, as our interest has been reawakened by the skin tests and studies in the etiology of this condition. Doctor Bogen has shown the inquisitive spirit in his work upon the diagnosis and therapeutics of disease which leads to advance.

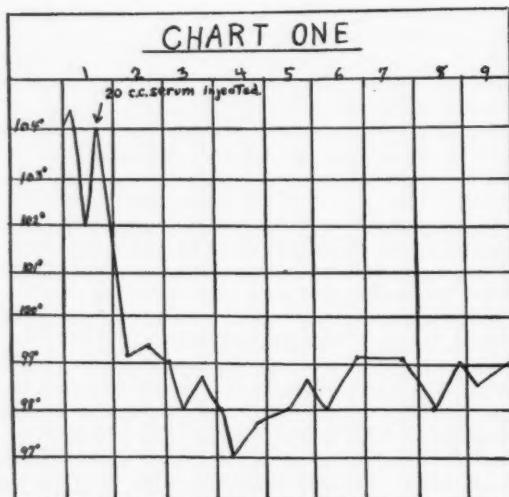
Personally we have been greatly aided in our diagnosis of atypical scarlet fever cases by the hyperleukocytosis with continued high eosinophilia the Rumpell-Leede phenomenon, this and the various discutent tests. In using the discutent tests of Schultz and Charlton it may be necessary to use serum upon the suspected case, and also use his serum upon a known case of scarlet fever, and when these various tests have been applied to a suspected case I see no reason to doubt the correctness of the diagnosis made. Bogen's results are in conformity with those published by others. However, until a more accurate determination of the exact amount of toxin required for immunization and an agreement of the best method to be followed in its preparation has been made, it seems best to counsel a use of the therapeutic serum only in hospitals and carefully controlled homes.

OSCAR REISS, M. D. (2007 Wilshire Boulevard, Los Angeles)—Doctor Bogen's paper represents an excellent review of the recent advances in scarlet fever, with a clear statement of the generally accepted conclusions, and the results are practically in accord with similar experiments in various parts of the country. In addition to observing the work of Bogen, I have Dick-tested a large group of children, and have used the Schultz-Charlton blanching test as an aid to differential diagnosis in scarlet fever, and am routinely using scarlet fever antitoxin in the treatment of the severe cases. However, I am not yet ready to use or advise the general use of scarlet fever toxin for the active immunization of nonimmune children. I believe there is a necessity for a more accurate determination of the exact amount of toxin that it requires to actively immunize an individual against scarlet fever, and for more definite proof that considerable harm is not done to a certain number of individuals to whom the toxin is given in an attempt at immunization. Particularly here in California where so many antimedical cults exist, it might do almost irreparable damage and make it extremely difficult at a later time to do general immunization if it be attempted at this time when our material is not sufficiently standardized and our knowledge not sufficiently accurate to secure nearly 100 per cent results.

I believe that the work of the Dicks, Dochez, and others, stands out as one of the crowning pieces of work in preventive medicine, and I have great hopes that in the near future immunization and antitoxic treatment of scarlet fever will reach the same assured place that has been reached in the immunization of diphtheria.

J. D. DUNSHEE, M. D. (156 North Spring Street, Los Angeles)—Doctor Bogen's paper is a clear and concise statement of a painstaking and thorough piece of work. He has gone carefully over the literature of scarlet fever, and his whole paper has demonstrated his ability in this line of research.

His work on erysipelas, though in a small series, cover-



The prevention of scarlet fever by the active immunization of susceptible individuals, so ably initiated twenty years ago by Gabritchewsky, is one of the most important but also the most difficult phases of the entire subject. It has been found that simply mimicking the splendid method used against

ing all the available material, exemplifies this and is very interesting.

During the time we were doing this, scarlet fever was reported in a boarding school for girls in Los Angeles, which gave an excellent opportunity for additional study. The pupils in this school are all Mexican, and 129 in number. Coincident with the appearance of scarlet, there were a large number of cases in the school, and the city as a whole, of some condition which may have been scarlet border-line cases not possible to diagnose positively as scarlet or influenza.

In addition to the one reported scarlet, there were six with rash which would clinically justify one in pronouncing scarlet. I did the Schultz-Charlton test on all cases with rash, getting a positive test with the one scarlet and a sister of hers. These were immediately transferred to the contagious service of the General Hospital.

The remaining ones with rash gave a negative reaction to the Schultz-Charlton, and a positive Dick test.

I Dick-tested all of the inmates of the institution; 26 per cent gave a positive reaction to this test. All were kept under close observation, particularly those giving a negative test. No new cases developed in this institution.

This was all done within twenty-four hours of the appearance of the first case, and consequently before sufficient time had elapsed to have given a negative Dick test after the onset of scarlet.

I am convinced of the usefulness of scarlet fever antitoxin in the treatment, and of these various tests as an aid to diagnosis, but do not feel that we are ready to use any preparation of toxin-antitoxin as a means of securing immunity.

I wish to acknowledge my appreciation to Eli Lilly & Company and H. K. Mulford for furnishing without charge both the antitoxin and the Dick test and control used in my work.

**ROGERS F. WAKEFIELD, M. D. (Los Angeles General Hospital, Los Angeles)**—One of the really valuable applications of the newer knowledge of scarlet fever may be found in the passive immunization of persons who have been exposed to the disease. A prophylactic injection of a small dose of the Dochez serum was given to a number of persons who were known to have been in contact with a scarlet fever patient, and no one of them developed the disease.

**Magnesium Sulphate Intravenously**—Lyle G. McNeile and John Vruwink, Los Angeles (*Jour. A. M. A.*), assert that the intravenous injection of a 10 per cent solution of magnesium sulphate is a valuable adjunct in the treatment of toxemia of pregnancy. It will cause some reduction of blood pressure, reduce edema, increase urinary output, and reduce or control other symptoms. It will control the convulsions of eclampsia in nearly every case, and exercises a favorable influence on the other symptoms of eclampsia. It is a safe procedure. As a prophylactic agent it will give definite results, the toxic symptoms will frequently disappear entirely, or the condition will be arrested and the patient go on to normal labor. If, on repeated injections, the toxic symptoms recur, pregnancy should be terminated. Regardless of the eventual course of the toxic state, intravenous medication places the patient in a condition with increased resistance and eliminates the dangers subsequent to convulsions both for the mother and for the baby.

When we find that the county medical society wields but little influence in the county we soon discover the secret if we seek for it. There is too much ill feeling. The doctors are not free enough in their everyday association, and the feeling is often so great that one man to gain an advantage over another may be willing to let the whole organization go to ruin. If our physicians do not discover means of taking care of themselves by union and organization, the public will in no distant day feel the wisdom of state direction of the practice of medicine, state medicine. The public see the necessity of physicians, but may they not see, to them, a better plan to secure such service, doing away with the individual private physicians?—J. Iowa M. Soc.

## RESECTION OF THE KIDNEY FOR STONE

By A. J. SCHOLL \*

DISCUSSION by Miley B. Wesson, San Francisco; H. M. Richter, Chicago; E. S. Judd, Rochester, Minnesota.

THE following report is based on a case of bilateral nephrolithiasis; one kidney was removed and the stone-bearing area of the other kidney resected. Czerny reported the first case of resection of the kidney in 1886; a portion of the kidney was removed following trauma. Kummell several years later resected a segment of a kidney for stone and abscess. Young resected the upper third of a kidney for localized pyonephrosis and stone. A clamp was placed on the renal pedicle during the resection. Young cites a patient operated on by König in which the upper atrophic portion of the kidney was resected and a stone removed. Richter reported a case in which the lower third of a kidney was replaced by a thin-walled sac containing turbid urine and several calculi. The upper segment of the kidney was firm and grossly normal in appearance. A wedge-shaped section including the entire sacculated lower third, extending down to the pelvis and going well back into firm normal tissue, was excised. Three months later the patient was perfectly well.

Cases in which resection was performed on a single remaining kidney are rare. Intervention in such circumstances is usually an operation of emergency and must necessarily be as conservative as possible. Papin reported a case of bilateral tuberculosis in which a partial resection was carried out on the left kidney; later a right nephrectomy was performed. The resected kidney had a duplicated pelvis.

Hinman has shown that in partially destroyed kidneys the return of function in the remaining kidney is at times prompt if the opposite kidney has been removed. Where there is bilateral disease with complete destruction of one kidney the better organ has gradually assumed most of the function. Removal of the dead kidney with repair of the other offers the patient the best opportunity for complete recovery. The work of Tuffier thirty years ago, and later Bobroff, demonstrated that life could be supported on a very small portion of a normal kidney. Tuffier did a total unilateral nephrectomy plus more or less extensive resections of the other kidney in an endeavor to find exactly the quantity of kidney tissue necessary for the maintenance of life. He found that there was a definite regeneration of tissues in the remaining segment if the portion allowed to remain was sound, otherwise not. Tuffier's work formed the basis of his later "morclement" nephrectomy. Stoerk described two methods of new formation of renal parenchyma, one by the elongation and winding around of normally present tubules, the other by ramifications due to new budding. Simpson demonstrated that the epithelium of the tubule is capa-

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ble of proliferation and small losses in the tubular epithelium are quickly replaced. When there is a demand for compensatory hypertrophy in the remaining renal tissue its beginning is indicated as early as the third day.

Bilateral nephrolithiasis is always a serious condition; this is especially so when one kidney is completely destroyed. Stone formation is found in both kidneys in about 10 per cent of cases. Israel found the condition in 11.2 per cent of 574 cases, and Federoff in 14 per cent of 250 cases. Bilateral stones may cause few or no symptoms. Elderly persons may get along and live a number of years without operation. Operative procedures in persons over 50 years of age who have had trouble for many years entail considerable risk. In early or middle life there is more need for satisfactory renal function; the kidney is still in a stage where regeneration of destroyed tissue may occur, and the risk of operation is less. If the patient is robust and both stones are of moderate size, and if the function in each kidney is approximately equal, primary bilateral operation may be considered, but only under unusual circumstances. In most cases one stone is large, occasionally very large, and occurs in a comparatively functionless kidney; the stone in the opposite kidney may be small. If neither stone is causing acute symptoms, the kidney which is least involved should be operated on first, and this is usually the one which has most recently caused symptoms. The stone in the better kidney is frequently small and free in the pelvis, and if not removed first may cause obstruction, which is more likely to result following the increased activity if the other kidney is operated on first.

When the better kidney is operated on first, if the opposite kidney becomes blocked there is but slight impairment of the general renal function. In this way the function remaining in the more diseased kidney may be utilized during the post-operative period. When the patient has recovered from the operation and the danger of general infection is past, the more diseased kidney may then be operated on and removed if necessary.

The following case of bilateral nephrolithiasis was operated on at the Mayo Clinic by E. S. Judd, who has kindly given me permission to make this report. Complete functional and blood chemistry studies have been made at regular intervals since operation:

Mrs. W. R., aged 32, came to the Mayo Clinic on account of attacks of chills, fever, and pyuria over a period of seven years. During the last few weeks she has had several attacks of dull, aching pain in her right side associated with nausea, vomiting, and frequency of micturition. On examination a mass 12 cm. in diameter was found in the region of the right kidney. The urine contained a large amount of pus. The phthalein was 45 per cent in two hours and fifteen minutes, and an x-ray examination revealed multiple large shadows in the region of the right, and a large, single shadow in the region of the left kidney.

Cystoscopic examination revealed bilateral nephrolithiasis. There was a functionless pyonephrosis on the right side, containing multiple stones which were scattered over a large area. The left kidney was infected, had a normal function, and contained a single stone 2 cm. in diameter.

At operation the right kidney, which was five times normal size and highly infected, was removed. The ureter was 2 cm. in diameter. The largest stone in the kidney

was 6 cm. long, and there was practically complete destruction of the kidney substance.

The patient recovered readily from the operation, and three months later the opposite kidney was operated on. The total phthalein return in two hours and fifteen minutes was 40 per cent. At operation a large abscess was found in the upper pole which contained one stone 2 cm. in diameter and several small stones. The lower pole and middle portion of the kidney were normal to sight and touch. The adrenal was adherent to the abscess area; it was dissected free and pushed back. The abscess area containing the stone was then resected, the line of excision being carried through the kidney just above the normal tissue. About two-thirds of a normal kidney was left after the resection. Several bleeding vessels and an open calyx were sutured over. The edges of the kidney were approximated with a continuous running suture. Several stay sutures of catgut were then inserted.

The first day after operation the patient passed 200 cc. of urine, and her face was somewhat puffy. Fluids were forced by mouth, proctoclysis, and by hyperdermoclysis. The output on the second day was much increased; on the third day, and after that, it was normal in amount. The puffiness left her face on the fourth day and she felt quite comfortable. She drained a moderate amount of serum and urine through her incision for ten days; fourteen days after operation her wound had completely healed. She had no further trouble. Ten months later she was in excellent health and was five months pregnant, in spite of a warning to the contrary. Two months after this she gave birth to a premature child who died one month later. Two years after her second operation she moved her family of four children to California. When last seen in January, 1926, she had gained weight, was able to do all her own housework, and felt better than she had at any time during the last ten years. She had no urinary symptoms and her urine was clear, and her salivary and blood urea normal.

The following table indicates the post-operative course and gives the laboratory data following the operation:

Date	Intake	Output	Blood		Salivary	Phthalein	Remarks
			urea	urea			
1924							
1/11						40%	
1/12	2400	250					Face puffy-edematous.
1/13	3200	1065					
1/14	2700	2720	72	75			Temp. 102. White count 12,000. Wound not draining.
1/15	3000	2000					
1/16	3200	2250	92	90			Temp. 99. Wound draining urine freely.
1/17	3000	1200					Slight urinary drainage.
1/18	2380	1000					
1/19	3050	1050	56	56		15%	White count 9600. Wound draining urine.
1/25			44	52		25%	Wound healed, no drainage.
3/2			23	40			
5/1			25	40			
7/15			22	30		45%	
12/26							Seven mo. baby born without difficulty. Baby lived 1 month.
1925							
1/13			20	24	50%	Blood pressure normal. Urine, no pus or alb., clear.	
2/25				20			General health excellent.
1926							
1/26			24	36			Has gained weight. Feels very well.

#### COMMENT

After the second operation there was a rather sudden, transient retention of all substances normally excreted by the kidney; this was in contrast to the more selective gradual retention which occurs in uremia. There were none of the convulsive or

gastro-intestinal symptoms associated with uremia. She was remarkably clear mentally and at all times quite comfortable.

The check of the blood urea and salivary urea determinations is of interest in this case. Hench and Aldrich carried out parallel determinations of both the salivary and blood urea in over 900 cases from which they developed their index. Certain salivary constituents have the property of forming compounds with mercury. Of these the salivary urea is the dominating mercury combining element. As urea retention occurs in the body, there is a proportionate increase in the salivary urea, indicated by a rise in the mercury-combining power of the saliva. The mercury-combining power of 100 cc. of saliva measured in cc. of 5 per cent bichloride of mercury is called the "salivary urea index."

At present I use the salivary urea index in all my determinations of urea retention. This test is simple and easily carried out, requiring only a few minutes of time and very little apparatus. It has the further advantage that when boiled the saliva may be sent for long distances, as was done in this case, without deteriorating or detracting from the accuracy of the test.

#### DISCUSSION

**MLEY B. WESSON, M. D.** (1275 Flood Building, San Francisco)—This report is a very valuable contribution to medical literature for two reasons: First, one and one-third kidneys were removed from a 32-year-old woman within a period of three months, and two years later the patient was still in excellent general health; and second, routine tests of blood urea, salivary urea and "phthalein" tests were continued throughout the period and found to confirm each other.

Czerny in 1887 reported the first case of resection of the human kidney. Dolgoff in 1900 found in dogs with a single kidney that any injury to cortex or medulla of the remaining kidney was fatal. Franklin, however, in 1906 successfully removed at one operation one and three-fifths kidneys from a 16-year-old girl because of a bilateral traumatic rupture. Young, Mursell, König, Lower, Richter, and others have reported unilateral resections for stones.

Federoff reported a series of 241 patients upon whom 250 operations were performed, stones being present on both sides in 14 per cent of the cases. Thomas has recently called attention to the fact that in infants and children 6 per cent of renal stones are bilateral, in adults 12 per cent, and bilateral renal stones are multiple in 66 per cent of all cases; also that bilateral renal stones when multiple or when large are rarely surgical unless an emergency exists. Doctor Scholl's case conforms to this rule as a definite emergency existed, one kidney being entirely destroyed, and the upper pole of the other was occupied by a large abscess.

Theories of renal counterbalance have been of philosophical interest for years, and largely buried in the foreign literature is a mass of experimental data. Simon in 1871 published his experimental studies (which were later confirmed by Tuffier, Paolo-Fiori, Castaigne, and others) of the hypertrophic development and the return of function in the remaining kidney following nephrectomy, and found that the completion of the changes took from twenty to twenty-five days, there being an increase of one-fifth to one-sixth of the original weight of the organ. They demonstrated that the amount of renal parenchyma necessary for the maintenance of health is one-third to one-fourth of the combined weight of the two kidneys. In reality this extreme reduction of the secretory field can suffice for only a few days (due to temporary tolerance of the excretitious substances which it stores) without grave symptoms of uremic intoxication, unless the remaining portion of the kidney has undergone a compensatory hypertrophy.

Compensatory hypertrophy after a nephrectomy is mi-

croscopically evident within twenty-four hours in changes which stimulate the first stages of nephritis. There is no confirmation of new glomeruli or tubules, but simply an increase in the volume of those pre-existing, according to Golgi, Eckhardt, O. Van der Stricht, Rosenstein, Sacerdotti, and Albarran.

In a great number of subjects hypertrophy of the remaining kidney is already developed even before the removal of the diseased kidney, thus offering the urinary secretion a substitute field already prepared for work. This providential hypertrophy has been reported in the destructive affections of one kidney by Rayer, Storck, Steiner, Neureuter, Valentin, Rosenstein, Rokitansky, Golgi, Naukerx, Chauffard, and others.

Doctor Scholl's paper is a very valuable contribution to the literature of renal counterbalance as well as to kidney surgery, and the parallel studies of urea retention are most interesting.

**H. M. RICHTER, M. D.** (104 South Michigan Avenue, Chicago)—Doctor Scholl's paper covers an important field in renal surgery which seems to have been but little touched upon in the published literature. The occasion for resection of a kidney for stone must be relatively infrequent, but when it occurs the surgeon familiar with the possibilities of conservative work will be in a position to give real service to his patient.

**E. S. JUDD, M. D.** (Mayo Clinic, Rochester, Minnesota)—I am very much interested in Scholl's paper on resection of the kidney for stone. Apparently, from the review of the literature, resection of the kidney was performed more often in the past than recently.

While resection should never be performed for neoplasm or tuberculosis of the kidney, nevertheless there are cases of infection and stone formation where it can be carried out to advantage.

Compensatory hypertrophy has a direct bearing on the results to be expected, and should be considered before performing a resection of the kidney. If the opposite kidney has normal function it is not at all likely that the traumatized remaining segment of a resected kidney would be of any avail. On the other hand, if the resection can be carried out without traumatizing or interfering in any way with the remaining segment, it is conceivable that this part of the kidney might continue to function.

A few years ago Hinman made a most important contribution to the experimental studies of compensatory hypertrophy; these have since been partially confirmed experimentally, and our clinical evidence supports his contention. His experiments show that renal reserve and compensatory hypertrophy effect a counterbalance following unilateral nephrectomy, and also that in unilateral disease without nephrectomy, an additional factor which he calls renal competition is active in the final readjustment. He believes that the unilateral lesion creates an unequal ability to work, one side being healthy and active, and the other diseased and less active, and that such activity is essential to renal growth. The gradually increasing demands on the kidney for work stimulates the tissue to greater activity and results in renal hypertrophy. Hinman also believes that renal atrophy is suggestive of renal inactivity, and that a diseased renal mass in competition with a hypertrophic mate gets less or less stimulation as the opposite side becomes more efficient, and so progressive inactivity leads to a disease atrophy. It is evident, then, that this renal reserve power and compensatory hypertrophy on one side and what he calls renal competition and disease atrophy on the other, is a most important consideration in any surgical disease of the kidney. Undoubtedly, then, in some of the cases in which a resection has been performed there was immediate atrophy of the renal tissue because the opposite kidney was enlarged and perfectly capable of performing all of the work. We have known, ever since Tuffier's work thirty-five years ago, that a person could carry on very well with about 80 to 100 gms. of sound renal tissue, and this case which Doctor Scholl is reporting is further evidence that part of one kidney is sufficient.

On several occasions we have had an opportunity to resect a double kidney, and also to remove a part of a

horseshoe kidney, but we have had only the one case in which there seemed to be a definite indication for the resection of a solitary kidney.

I wish to congratulate Doctor Scholl on this detailed report and the attractive manner in which he has presented the material.

### VINCENT'S INFECTION

#### ITS SIGNIFICANCE AS THE PRECURSOR OF PYORRHEA AND ITS POSSIBILITIES AS A CAUSE OF OTHER DISEASES

By ERNEST MADISON BURNS \*

(From the Los Angeles County Public Health  
Department)

DISCUSSION by Charles C. Browning, Los Angeles.

THE recognition of focal infection as an entity has constituted a great forward step in modern medicine. With this fact in mind there is a tendency to get away from generalization both in diagnosis and treatment. In searching for foci of infection attention has been called to those tissues most often involved and to the most common portals of entry of infection. The mouth, nose, and throat are by far the greatest offenders. It is known that most of the acute exanthemata, common colds, tonsillitis, diphtheria, as well as the gastro-intestinal and pulmonary infections gain entry through these exposed surfaces. Diseased sinuses, teeth, and tonsils have been proved to be causative factors in many organic and systemic disorders. In a like manner Vincent's infection may be shown to enter and affect the body.

I have been impressed by the appalling loss of teeth in relatively young people. This has been mentioned and its serious aspects widely published time and again. Someone remarked, more than half seriously, that within a few more generations man may be a toothless animal. This condition prevails among people in all classes of society. It is not so noticeable unless attention is called to it, since the teeth are usually replaced by bridgework or plates of one type or another. Once noticed, the number of people under 35, particularly women, wearing plates or extensive bridgework, has a significance at once impressive and disturbing.

This loss of teeth, admittedly due to infection, when considered from the standpoint of esthetic effect, discomfort and disturbances in digestion, is serious, totally aside from the terrific punishment to which the body has usually been subjected in that period between the beginning of infection and the elimination of the teeth as possible foci.

My attention was called to peridental Vincent's infection some years ago at Hot Springs, South Dakota. Here a large number of patients were examined and treated, with the infection varying in severity from bleeding or receding gums to actual loosening of teeth. Smear examinations showed fusiform bacilli and spirilla *Vincenti*. This local prevalence of spirillum infection or "trench mouth" was

thought to have been introduced by World War veteran patients in a nearby government hospital. After further study I became convinced of a definite relationship between early loss of teeth and Vincent's infection.

I have noticed that many mothers, usually under 35 (my work being with contagious diseases), have receding gums to a greater or less degree. Smears made from 120 of them showed 80 per cent positive for spirilla and fusiform bacilli upon first examination. In addition to these, more than a thousand patients were recognized as suffering from the same infection, but the diagnoses were not confirmed by smear examination. Many patients are surprised when told of an infection, because they had been told that they had no pyorrhea. Others had been undergoing treatment for pyorrhea. One mother with smears positive for Vincent's infection had just concluded a course of dental treatment. The patients showed varying degrees of recession of the gums, loose teeth and even loss of sound teeth, and they represented many nationalities from all walks of life. My findings confirm those of other observers as to the universal prevalence of the spirilla and fusiform bacilli about the teeth. However, my patients have been mostly women, whereas those of most writers have been men, usually soldiers, or children, among whom universal prevalence of these organisms has been considered as being part of the flora of the normal mouth. I consider these organisms universally pathogenic. Recently I have had three patients with marked anemia, apparently secondary to some systemic infection. The three patients had dirty mouths, which proved to be heavily positive to Vincent's organism. They were all under the age of 35 and, in addition to anorexia and anemia, each represented a distinct type. One was "rheumatic," one suspected of being tubercular, although sputum was repeatedly negative, while in the other symptoms indicated disturbances of the gastro-intestinal tract. X-ray showed no root abscesses. The infecting organisms disappeared and all patients improved rapidly under spirochaetocidal treatment.

#### PATHOLOGY

In early stages peridental Vincent's infection is characterized by a recession of the gingival margin of the gums, exposing a characteristic clean-cut margin, typical of spirillum ulceration. Instead of the gum fitting closely about the teeth in the normal, sloping manner, it stands out, emphasizing the line of juncture. There may or may not be tenderness or bleeding of the gums; usually not. The disease is progressive, showing no tendency to be self-limited, its progress varying with the general condition of the individual and with the care of the teeth and mouth. Finally the gingival margin becomes farther retracted until there is the appearance of a ridge at the juncture. In reality this is an undermined margin under which food particles and bacterial forms lodge and, due to improper oxidation, favor the deposition of calcium or tartar. At this relatively advanced stage, or even later, the diagnosis of pyorrhea is usually made. The tartar may be scraped from the teeth without using specific medication, often traumatizing the gums, and thus encouraging extension of the process until the teeth either become loose or the patient develops constitutional

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symptoms indicative of low-grade focal infection for which the teeth are sometimes extracted, whether abscessed or not. This describes the average case of peridental Vincent's infection.

In addition to this there are many secondary manifestations described by various workers. Of these Vincent's angina is most widely known; next in the matter of prominence at present is noma of cheek or genitalia.

Waldrop reviews the literature on spirochaetosis with regard to certain forms of dysenteric enteritis which respond quickly to arsenical treatment, and urges the study of spirochaetosis in the mouth in this disease. Pilot and co-workers report the frequent occurrence of Vincent's spirillum and fusiform bacillus in the smegma of both male and female. In their experience these organisms were very rare in the vagina, the vagina being acid.

McNeil reports a case of pulmonary spirochaetosis showing bacillus fusiforms and spirillum Vincenti. The patient was suspected of being tubercular, but the suspicion was not confirmed by ten successive sputum examinations. There have been about a dozen similar cases reported in this country, and I have seen one such patient. Barker and Miller report a case of perforating ulcer of the hard palate, negative Wassermann, positive Vincent's. Pilot and co-workers have shown the almost constant occurrence of the spirillum and fusiform bacillus in tonsils, adenoids, and chronic ear infection. Other writers speak of these organisms as having a proven or suspected etiological role in hospital gangrene, fetid abscesses about the mouth or genitalia, in the subpectoral, hepatic, splenic, pulmonary or cerebral areas; mastoiditis, appendicitis, fetid pleurisy, gangrenous ulcers of the penis, certain tropical sores resembling noma, and in various skin conditions. It may be seen from these reports that apparently we have in this infection an organism quite as versatile in its manifestations and in its ability to simulate other conditions as the sprochaeta pallida. I am also suggesting what may be a logical relationship as a causative factor in other conditions long recognized, but of unknown etiology.

It was long ago suggested by some pathologists that hemolysis in pernicious anemia was gastro-intestinal in origin. The characteristic recession of the gingival margins is given as one of the pathognomonic signs. Attention is called to the close resemblance of both the clinical picture and post-mortem appearance to that of surra and dourine in horses, a trypanosome infection. Addison in his original work characterizes pernicious anemia as "a general anemia occurring without any discoverable cause in patients in whom there had been no loss of blood, no existing diarrhea, chlorosis, purpura and no renal, splenic, miasmatic, glandular, strumous or malignant disease." William Hunter claims that a large number of cases often classed as pernicious anemia are really of an infective nature and not related to the true Addisonian anemia, which he regards as a specific glossitis with oral, gastric and intestinal sepsis.

Other writers have called attention to the association of the acute phase of Vincent's infection, such as the angina with certain skin conditions. Why may not some of the chronic skin conditions of unknown etiology, such as psoriasis, pityriasis or vitiligo, be

associated with the chronic phase of Vincent's infection such as occurs about the teeth, just as in the case of the various skin manifestations of syphilis? There is a similar suggested relationship in certain forms of arthritis. Many other conditions such as Hodgkin's disease, which, from their nature and location, point to an original mouth or throat infection, may be placed in this group.

#### ETIOLOGY

Spirilla and fusiform bacilli were first recognized by Miller and later associated with Vincent's angina by Rauchfor. The organisms have been variously described, as a fusiform bacillus and Vincent's spirillum occurring in symbiosis; later by Tunnicliff as a single organism, a fusiform bacillus extremely pleomorphic in form, varying in length, size and appearance, depending on the media and stage of development. The majority of workers, however, favor the older belief, that the cause of Vincent's infection is a spirillum with a bacillus in symbiosis. This theory is borne out by the apparent specificity of the arsenicals in the treatment of Vincent's infection. Koch's postulates have never been fulfilled on any form of Vincent's infection. Therefore, any conclusion as to the etiologic role of bacillus fusiformis and Vincent's spirillum must be based upon clinical evidence, including smear examination, until such time as the life history of the organisms is more completely revealed. Vincent's infection is no doubt spread in much the same manner as the more common infections of the mouth and upper respiratory tract. The bacillus fusiformis and spirillum Vincenti gain a foothold in children, as shown by Pilot and co-workers, in the tonsils and adenoids where they may establish a permanent focus. Dental caries and the loss of the deciduous teeth, producing open wounds in the gums, provide many opportunities for the entrance of these and other infecting organisms. Trauma to the gums, either accidental or due to an overzealous use of the toothbrush or toothpick, also provides vulnerable openings for infection. Traumatization of the gums in dental treatments without careful after treatment may only serve to extend the process. The same may be said of the use of stiff toothbrushes. They are recommended apparently with the idea that they substitute for the roughage diet of earlier generations. The more logical explanation of the dietary relationship is that our present day "refined food-stuffs" may lack vitamins and, perhaps still more important, there is the marked increase in sugar ingestion.

Other conditions may be mentioned as contributing factors in the progress of peridental Vincent's infection. Among them carious teeth and improperly applied crowns serve as lodging places for the infection; malocclusion may lower the resistance of the gums about a particular tooth because of the unequal distribution of pressure in the bite; the use of tobacco may, because of its alkalinity, affect the H-ion concentration of the saliva, favoring both the deposition of tartar and the growth of the bacillus fusiformis and Vincent's spirillum.

The arsenicals have been favored in the treatment of all forms of Vincent's infection. Arsphenamine and neoarsphenamine have been used in 10 per cent solution with glycerine as a local application. These should be used only in fresh solution, as they are

not stable and quickly increase in toxicity upon standing. Fowler's solution locally applied by applicator or toothbrush or as a mouth wash in the strength of a teaspoonful of Fowler's solution to a glass of water is even more often used. Patients with constitutional symptoms should be given either Fowler's solution by mouth, the arsphenamines intravenously or the intramuscular injection of the cacodylates. In conjunction with this active medication the patient should use sodium perborate solution or hydrogen peroxide, potassium chlorate or potassium permanganate solution as a mouth wash. The value of these solutions is due to their properties of oxidation, of course contraverting the anaerobic action of the organisms.

#### CONCLUSIONS

It is not my wish to overestimate the pathogenic importance of this infection. However, it is my most earnest desire to emphasize its importance, not only in its obvious relationship as a precursor of pyorrhea, but in its infinite possibilities as causative agent in other conditions of hitherto unknown etiology. I believe that, in order to emphasize its importance to the medical and dental professions, it should be made reportable.

#### DISCUSSION

CHARLES C. BROWNING, M. D. (Merritt Building, Los Angeles)—The influence of infection of periodental tissues on the general health is deserving of most careful attention.

Within the past few years the literature on this subject has been voluminous, and both the dental and medical professions are appreciating more and more the importance of infections of the upper respiratory and digestive tracts. The extent of the influence on the viscera of the thorax and abdomen is being more generally recognized. The therapeutic value of care of primary foci in the treatment of what may be termed secondary lesions in tissues distant from the site of the original foci of infection is also being frequently demonstrated.

That the pus-producing organisms, as streptococci, staphylococci, diplococci, find lodgment in the human body very early in life and persist continuously throughout life, is very generally recognized. That disease is produced by these organisms as a clinical entity is relatively infrequent.

The importance of Vincent's infection is undoubtedly and is frequently overlooked. However, the prevalence of its existence has not been generally recognized as occurring as frequently as indicated by the author of the paper.

The claim for universal infection and the prominent part ascribed to it in the development of disease, in a discourse prepared with so much evident care as the foregoing, is worthy of consideration. However, I have failed to confirm the existence of these organisms to the extent indicated by the author.

I do not consider the fact that the cases reported by Burns yielded to arsenic treatment applied locally and used systemically as necessarily an indication that the pathological changes were due entirely or primarily to the spirochaeta, nor that the spirochaeta observed were necessarily Vincent's infection. Arsenical preparations administered internally have an influence on the cellular elements of the body in such manner that they raise the general resistance to depressant influences whether bacterial or not. Locally applied, they have a similarly stimulating influence. It is also true that many cases of periodental infection yield to treatment with the aniline dyes and other agents; also by surgical procedure and frequently more readily to medicinal and surgical efforts combined.

The oft-repeated examinations of infections of peri-

dental tissues have shown very early existence of the more common pyogenic organisms. The early period in infancy in which pyogenic organisms have been found to exist in the body is against this theory, which demands further investigation before we can accept Burns' findings. However, I appreciate his work and believe it merits further consideration. It may be found that we have overlooked more frequently than we have appreciated an important factor in the cases of infection of the periodental tissues.

#### THE INTRAVENOUS USE OF SODIUM CACODYLATE, MERCUROCHROME-220 SOLUBLE, AND GENTIAN VIOLET IN MALIGNANT ENDOCARDITIS

By WILLIAM H. LEAKE \*

*The results of intravenous therapy with sodium cacodylate, mercurochrome, and gentian violet in eleven cases of malignant endocarditis are reported.*

*Gentian violet and mercurochrome were used in eight cases. Sodium cacodylate was administered to three of the patients receiving dye treatment, and to three who received no other intravenous medication.*

*Ten of the eleven cases reported showed positive blood cultures. Nonhemolytic streptococci were found in nine, hemolytic streptococci in one. All blood cultures which were made following treatment showed an active growth.*

*The results were disappointing: Ten of the eleven patients are known to be dead; one has been lost from observation.*

*From my observation of this small series of cases I am of the opinion that little benefit is to be expected from intravenous dye therapy, or from sodium cacodylate in malignant endocarditis.*

DISCUSSION by Roy E. Thomas, Los Angeles; Egerton Crispin, Los Angeles; E. Richmond Ware, Los Angeles.

THE object of this paper is to furnish a brief review of the literature concerning the treatment and results in malignant or ulcerative endocarditis and to report the results of intravenous treatment with sodium cacodylate, mercurochrome, and gentian violet in a series of eleven patients. No attempt is made to describe in detail the pathology or symptomatology of the disease. The terminology is somewhat confusing because of several different names applied to the disease, and I shall not discuss their relative merits. For practical purposes malignant endocarditis is of two types: acute, and subacute or chronic. The subacute or chronic variety is more frequently encountered; it runs a course of six weeks to two or more years, and at some period a positive blood culture always can be obtained if the proper technic is followed. Of the names applied to this condition the more commonly accepted ones are chronic infectious endocarditis, subacute infective endocarditis, subacute bacterial endocarditis, and endocarditis lenta. The organism recovered from the blood cultures is usually streptococcus viridans or, less frequently, pneumococcus; while in the acute variety strepto-

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coccus hemolyticus is, as a rule, the causative organism.

The treatment of malignant endocarditis is still very unsatisfactory in spite of extensive investigation, both experimental and clinical. Many different drugs, vaccines and sera have been suggested and used, but the results have been extremely disappointing. Spontaneous recoveries and the so-called "bacteria-free" stage in the subacute type have been noted by several observers. Oille, Detwiler, and Graham reported recoveries in twenty-three patients with streptococcus viridans endocarditis; a few years later twenty of this group were still alive. Forty cases of streptococcus viridans bacteremia with ten recoveries were observed by Warren and Herrick in 1916. Miller and Libman have also reported the recovery of several patients with subacute bacterial endocarditis. Capps had two deaths in eight patients treated with sodium cacodylate. The duration of the disease in the two fatal cases was six and thirteen months, respectively. Sodium cacodylate was given daily (usually intravenously) in doses of from one to four grains (.066 to .26 gm.) until a strong garlic odor was detected on the breath.

Churchman showed that gentian violet and other triphenylmethane dyes were bactericidal and bacteriostatic, especially for Gram positive organisms. He used gentian violet intravenously in patients with septicemia or localized infections by pyogenic cocci with rather encouraging results. However, he later reported that anilin dyes were not very powerful bactericides, but that their bacteriostatic properties were marked. Churchman found that the activity of the dyes was impaired by certain substances in the body, especially the blood serum. He stated that gentian violet in vivo was very unstable, disappearing from the blood stream within two hours after injection.

Young and Hill reported twelve patients with septicemia and local infections treated by intravenous injections of dyes. Seven were given mercurochrome and five received gentian violet; all recovered. In six of those treated with mercurochrome the organism was of the colon group, and in the other a staphylococcus. All five treated by gentian violet were staphylococcus infections. Two cases each of streptococcus hemolyticus and streptococcus viridans septicemias, not included in this series, were treated without success. Young in a more recent article reported 255 cases of various infections treated with mercurochrome. Seventy-two failed to show any improvement, while 108 were pronounced cured. One case of streptococcus hemolyticus septicemia recovered following three injections of mercurochrome. Piper found intravenous injections of mercurochrome of value when used early in certain blood-stream infections. He found it of no value in the treatment of streptococcus viridans septicemia.

Reed and Lum have reported recovery in a case of nonhemolytic streptococcus septicemia following treatment with mercurochrome and gentian violet; three other cases resulted fatally. In several patients treated with mercurochrome, Reed and Lum observed severe stomatitis with hemorrhage, diarrhea, and dysentery, and the appearance of albumin and casts in the urine.

Gentian violet used intravenously was apparently

responsible for the recovery of a case of streptococcus viridans endocarditis reported by Major.

Brill and Meyers report clinical observations made on three cases of bacteremia and two cases of local gonococcal infection treated by intravenous injections of mercurochrome and gentian violet. They concluded, after carefully controlling their observations by cultural checks, that the intravascular injections of the dyes in no way interfered with the progress of the infection.

#### PERSONAL EXPERIENCE

During the past ten months I have observed the effect of sodium cacodylate, mercurochrome, and gentian violet in nine patients with subacute bacterial endocarditis, one with acute nonhemolytic streptococcus endocarditis and one with acute hemolytic streptococcus endocarditis. These patients were in the Los Angeles General Hospital. Sodium cacodylate was administered intravenously in daily doses of three to five grains (0.2 to 0.33 gm.) and with few exceptions the drug was pushed until a strong garlic odor was detected on the breath. Mercurochrome and gentian violet were given intravenously in doses ranging from two to five milligrams per kilogram of body weight. Freshly prepared 1 per cent aqueous solutions were used. The diagnosis was confirmed by blood culture in ten of the eleven patients, and in the eleventh the organisms were obtained from the vegetations at necropsy.

The results were uniformly disappointing: with the exception of one patient who has been lost from observation, ten patients out of this series of eleven are known to be dead. The duration of the disease ranged from two and one-half months to fifteen months in the subacute bacterial endocarditis cases. The two patients with the acute streptococcus endocarditis lived twelve days and five weeks, respectively. In the cases with positive blood cultures, the organisms were practically always recovered from the blood after intensive treatment with sodium cacodylate, mercurochrome, or gentian violet. One patient (case 1) after receiving sodium cacodylate over a period of several months, and repeated injections of mercurochrome and gentian violet showed in his blood culture a heavy growth of streptococcus viridans. This patient was under observation for ten months, the longest period of any in this series.

Sodium cacodylate produced no unpleasant or alarming symptoms except for the so-called "garlic breath." Mercurochrome in the dosage advocated by Young and Hill frequently produced marked salivation, but this was rarely observed when the dosage was reduced. Severe systemic reactions consisting of chills, high fever, and general malaise frequently followed the use of mercurochrome. Except for an intense cyanosis of short duration, gentian violet produced no untoward symptoms. If the drug were injected very slowly, however, the cyanosis was slight. Case reports will be limited to four of the most interesting of the series, and the eleven cases are summarized in the accompanying table.

CASE I—W. R., a white man, aged 25, entered the medical service May 26, 1924, complaining of rapid pulse, chills and sweats, weakness, and fever of six months' duration. He had suffered an attack of endocarditis two years prior to the onset of these symptoms. Examination

and blood culture revealed the typical findings of streptococcus viridans endocarditis.

**Treatment and Course**—The patient was under observation for a period of ten months. During that time he received four intravenous injections (20 cc.) of 1 per cent gentian violet solution, one dose (15 cc.) of 1 per cent mercurochrome by vein, and many intravenous injections of sodium cacodylate. Blood cultures from time to time were always positive for streptococcus viridans. A severe diarrhea was produced by the mercurochrome, but the other medication seemingly produced no ill effects. The patient died at home February 20, 1925. Necropsy was not permitted.

**CASE III**—L. L., a man, aged 25, entered the eye service August 12, 1924, complaining of blindness of the left eye and poor vision of the right of three weeks' duration. He had also experienced frequent chills and sweats. He gave a history of several attacks of "rheumatism." Examination disclosed a subacute bacterial endocarditis. There were extensive retinal hemorrhages; a diastolic murmur over the aortic area, and a systolic blow at the apex; petechiae in the conjunctivae and in the finger tips. Blood culture showed a pure growth of streptococcus viridans.

**Treatment and Course**—August 16 the patient was given 15 cc. of 1 per cent mercurochrome by vein. There was no reaction. August 20, a second injection of 20 cc. of 1 per cent mercurochrome was given. Blood culture the following day again

showed streptococcus viridans. August 25, another dose of 15 cc. of 1 per cent mercurochrome was administered. The patient was in a state of euphoria. September 4, an injection of 20 cc. of 1 per cent gentian violet was given intravenously. A blood culture at this time was still positive. September 8, a second intravenous injection of 20 cc. of 1 per cent gentian violet was given. September 12, the patient was discharged at his request. He died at home October 19, 1924.

**CASE VII**—C. B., a married woman, aged 19, was admitted to the medical service September 10, 1924, complaining of fever, chills and sweats, palpitation, and pain over heart, of three weeks' duration. She had not felt well for several weeks prior to this time. She gave a history of diphtheria, influenza, and frequent sore throats. Examination revealed the typical findings of subacute bacterial endocarditis. Blood culture showed a pure growth of nonhemolytic streptococcus.

**Treatment and Course**—September 16 five grains of sodium cacodylate were administered by vein, and daily thereafter for twenty-three days, when medication was temporarily discontinued because early signs of overdosage were noted. Smaller amounts, three grains daily, were given, beginning October 9 and continuing for four days, after which no more was given until October 23. In all this patient received 144 grains (9.6 gm.) of sodium cacodylate without affecting the positive blood culture. September 24, a

Patient	Age	Sex	Period of Observation	Hist. of Rheum.	Temp.	Embolic Phenomena					Blood Cultures	Treatment Result	
						Valves Affected	Skin	Kidneys	Spleen	Brain		Gen. Violet Mercuro. Sod. Cacodyl.	Died
I W. R.	25	M.	11 months	+	97.6° to 104°	Mitral	+	+	+	0	Strep. Viridans	Gen. Violet Mercuro. Sod. Cacodyl.	Died
II M. E. B.	60	F.	2½ months	0	97.6° to 101.6°	Mitral	+	0	0	+	Strep. Viridans	Gen. Violet Iron Cacodyl.	Died
III L. L.	25	M.	2 months	+	98.6° to 103.4°	Mitral and Aortic	+	+	+	0	Strep. Viridans	Gen. Violet Mercuro.	Died
IV H. T.	40	F.	1½ months	0	98.4° to 101.4°	Mitral	+	0	0	+	No Growth	Sodium Cacodylate	Died
V W. V.	40	M.	2 months	+	98.2° to 105°	Mitral and Aortic	+	+	+	0	Non-Hem. Strep.	Mercuro. Sod. Cacodylate	Died
VI M. S.	56	F.	2 months	0	97° to 102°	Mitral	+	0	+	0	Non-Hem. Strep.	Mercuro. Transfusion	Died
VII C. B.	19	F.	2 months	0	97.2° to 103.6°	Mitral	+	0	+	0	Non-Hem. Strep.	Mercuro. Sod. Cacodyl. Tonsillectomy	Died
VIII M. B.	50	F.	2 weeks	0	97.4° to 101.8°	Mitral	+	+	+	0	Strep. Viridans	Sodium Cacodylate	Died
XI J. L.	43	M.	12 days	+	97.6° to 101.8°	Mitral	+	0	0	0	Strep. Viridans	Sodium Cacodylate	Lost from Obs.
X B. H.	14	M.	1 week	0	97° to 106°	Tricuspid	+	+	+	+	Non-Hem. Strep.	Mercuro. Gentian Violet	Died
XI A. A.	31	F.	3 weeks	0	98° to 105°	Mitral	+	+	+	0	Hemolyt. Strep.	Mercuro. Gen. Violet. Transfusion, Magnesium Sulph., Anti-Strep. Serum, Auto. Vacc. Neo-arsph.	Died

tonsillectomy was performed under local anesthesia. Postoperative convalescence was uneventful. October 13, the patient received 15 cc. of 1 per cent mercurochrome by vein. There was no reaction. Blood culture showed a heavy growth of nonhemolytic streptococcus. The patient grew progressively worse, death occurring October 27. The diagnosis was confirmed at necropsy.

**CASE X—**B. H., a boy, aged 14, was admitted to the surgical service November 14, 1924, with an infected right hand. Ten days before admission he injured his hand while cranking an automobile. Five days later he experienced pain in the right wrist and hand, followed by chills and high fever. Examination revealed a well-developed, acutely ill boy with a temperature of 104. There was swelling and redness of the dorsum of the right hand and wrist. The leukocyte count was 50,000, with 85 per cent polymorphonuclears. The urine contained a trace of albumin and a few casts. A diagnosis of streptococcus septicemia was made.

**Treatment and Course—**November 14, a dose of 25 cc. of 1 per cent mercurochrome was given intravenously. This was followed by an immediate rise in temperature, and by diarrhea the following day. November 15, the patient was no better. The right wrist was incised and a small amount of pus was obtained. Culture of the pus showed a non-hemolytic streptococcus. November 16, an injection of 25 cc. of 1 per cent gentian violet was administered intravenously. There was a slight febrile reaction. November 17, the patient received 15 cc. of 1 per cent gentian violet by vein. Blood culture showed a heavy growth of nonhemolytic streptococcus. November 18, a second dose of 25 cc. of 1 per cent mercurochrome was given. This was followed by a severe chill and rise in temperature. November 21, the patient died suddenly while having a convolution. Necropsy revealed a generalized septicemia and an acute ulcerative endocarditis.

#### DISCUSSION

**E. RICHMOND WARE, M. D. (507 Professional Building, Los Angeles)—**Mercurochrome intravenously has done a vast amount of damage in the last two years. I wish we had records of more cases of this nature. Leake does not describe the condition of the bowel and kidneys in his autopsied patients. A recent report in the Journal of the American Medical Association from the office of the Chief Medical Examiner of the City of New York and from Bellevue Hospital is most interesting in this connection. The necropsies of five deaths following sepsis which had been treated by mercurochrome intravenously are described. They all showed kidney degeneration and ulcerative colitis typical of acute mercurial poisoning. Chemical analysis of the viscera showed large amounts of mercury. This series has since been increased to twelve.

A stomatitis and diarrhea is the rule rather than the exception following mercurochrome given intravenously in the doses originally recommended by Young. In my experience I have never been convinced of its value, and I have seen several instances of extreme toxic reactions. Personally I believe its use is not warranted. Further reports similar to this will do much to stop its indiscriminate and dangerous use.

**EGERTON CRISPIN, M. D. (Pacific Mutual Building)—**Doctor Leake has presented some interesting data. His work is to be commended. His results are in general accord with most of the reports that are coming to our

attention regarding this type of therapy in the group of streptococcus infections. A few patients have been reported as having gotten well. Most of the relatively large number of patients that have not been benefited and have since died are not reported. It would seem that with the damage attendant with mercurochrome its use should be discouraged, except where consultation and institutional care are possible and to instances where the family having the nature of the illness explained are willing to record their desire that this therapeutic procedure be used as a possible final resort. Gentian violet and sodium cacodylate, apparently less harmful, offer but little. The public attitude toward the medical profession, particularly where sera and chemicals of indefinitely determined possibilities are used, is far from favorable. Much more harm than good often may be done by too free use of these chemicals as therapeutic measures, unless they offer more than at present.

**ROY E. THOMAS, M. D. (1136 West Sixth Street, Los Angeles)—**When one considers the pathology of chronic bacterial endocarditis it is difficult to understand how the lesions could be affected by mercurochrome or other similar drug in any concentration which is safe to give. Solutions of from 3 to 5 per cent of mercurochrome can be painted on tonsils infected with streptococcus without materially altering the course of infection.

Animal experimentation has shown little to encourage us in expecting much from dyetherapy in the pyogenic infections. When this treatment was first advocated there was a rush by enthusiasts to publish reports of startling cures. A few carefully worked up series of cases such as the one reported by Doctor Leake in this paper will serve to put the intravenous use of mercurochrome in endocarditis and blood-stream infections where I believe it belongs, in the discard.

The use of sodium cacodylate as advocated by Capps is certainly safer, but in my own hands the results have been disappointing.

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An unknown reader sent us a copy of "The Independent Reporter" (Skowhegan, Maine), with a marked editorial, from which the following is taken:

"The matter of food, more or less neglected until the present era, has of late been made the subject of the most exhaustive research. The results are of the highest value. We are so much in, or upon, the margin of the research period, however, that it is difficult to make wise use of the immense mass of information dumped upon us from every side. The imagination could not build theories more grotesque or more highly dangerous than can be found boldly recommended and seemingly on good authority. Common sense and caution are needed as never before."

"There is one danger signal which I regard as infallible. If an enthusiastic food specialist tries to bring the medical fraternity into disrepute, to impugn their motives, or question their intelligence, little or no attention should be paid to him."

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Two sets of problems confront the medical profession today. One is internal and has to do with ethics, conduct, advertising, organization, and medical education. Many other items might be added to this brief list. The other is external and may be summed up in the words "state medicine." Insidiously and slowly, without appreciation of their ultimate effect on medical practice, by their often well-meaning but thoughtless sponsors, or boldly and with deliberate intent to work quickly a revolution, certain movements have been allowed to gain headway or have been instituted which if unchecked will lead to the socialization of the practice of medicine.—L. L. Bigelow, Ohio State M. J.

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Only one or two of the military surgeons of our Civil War employed a clinical thermometer. These men were probably looked upon as ultra-scientific and therefore impractical. In 1868, however, Wunderliche's classic work on clinical thermometry appeared, and this finally convinced the medical world of the importance of the thermometer in medicine.—Rufus Cole, *Science*, August, 1926.

## A STUDY OF SYMPTOMS OF EXOPHTHALMIC GOITER WHICH ARE PRACTICALLY DIAGNOSTIC

By ARTHUR E. MARK\*

*The usual textbook symptoms of exophthalmic goiter, with the exception of bilateral exophthalmos, are not of much diagnostic value.*

*First impressions of patients, especially regarding the pulse rate and blood pressure, may be very misleading, as attested by frequent pulse rates of 120 in nervous individuals, which are found to be normal on a subsequent day.*

*Pulse rates which are persistently above 80, especially during sleep, should be looked upon with suspicion, and every effort made to rule out disease, especially hyperthyroidism.*

*Very occasionally a patient with exophthalmic goiter may have a low pulse rate, one which is really within normal limits.*

*Quadriceps power loss is one of the most important diagnostic symptoms of exophthalmic goiter.*

*A feeling of sustained warmth for weeks or months in the absence of fever is practically pathognomonic.*

*A history of ravenous appetite is practically always present at some time during the disease. Weight loss, together with a ravenous appetite, are only to be found in patients with hyperthyroidism and diabetes mellitus.*

*Exophthalmic goiter patients present that tendency to develop remissions during which time they may be only slightly toxic, or apparently absolutely free from toxicity.*

*Thrills and bruits over the superior thyroid vessels occur in 60 to 80 per cent of cases, and when louder here than over the inferior thyroid vessels are practically diagnostic.*

*The tendency for exophthalmic goiter patients to develop crises is quite marked.*

*Properly done metabolic readings, repeated as needed, offer the most absolute method of diagnosis, especially in border-line cases.*

*A metabolic reading of plus 15 to plus 20 in the absence of any findings of exophthalmic goiter on rechecking under suitable conditions usually proves to be normal.*

*Response of exophthalmic goiter patients to Lugol's solution amounts almost to a therapeutic test. From a diagnostic standpoint a therapeutic test, however, is far from the ideal.*

*Discussion by Rea Smith, Los Angeles; W. W. Washburn, San Francisco.*

THE exact cause of exophthalmic goiter has as yet not been determined. That there is an excessive amount of thyroxin which becomes disseminated throughout the system with a special predilection for the nervous system is quite evident. The reason for the overproduction is, no doubt, to be found in an unstable thyroid molecule with the iodine content playing a major role. Improvement following iodine therapy in the form of Lugol's solution, as brought out by Plummer, certainly emphasizes this fact.

In the consideration of the symptomatology too much emphasis should not be placed upon the so-called cardinal symptoms, namely, exophthalmos, nervousness, tremor, tachycardia, and weight loss. While being very common symptoms, with the exception of exophthalmos, they are in themselves not as valuable from a diagnostic standpoint as several

other symptoms and findings which I wish to bring out.

Exophthalmos, especially if bilateral, is a very important finding and occurs in approximately 60 per cent of cases. When present the commonly described eye signs such as Von Graef's, Stellwag's, and Mobius are usually easily elicited.

The attendant excitement and embarrassment which is naturally displayed by certain individuals when first examined is often in itself a sufficient stimulus to accelerate the pulse rate. Although well known, this may be overlooked and sometimes misinterpreted. Confusion in these cases is greatly augmented by the presence of a thyroid which might be interpreted as being enlarged, and really often is enlarged, but without the accompanying symptomatology which one could interpret as being due to hyperthyroidism.

In certain individuals of a neurotic type and with no definite pathology a normal pulse rate may be obtained only during the period of sleep. Again patients of this type may present a pulse rate of 80 to 90, which is normal for them and which may be present at all times. Generally speaking, however, pulse rates which are persistently above 80 should be looked upon with suspicion, and every effort should be made to rule out any possible pathology, especially thyroid disturbances. Very occasionally a patient with exophthalmic goiter may have a low pulse, one which is really within normal limits.

One can readily see that the pulse rate in itself is far from diagnostic. Observation of it over a period of time in border-line cases gives valuable information, but in the final analysis it should only occupy a part of our attention. The picture as a whole, with the careful analysis of all the symptoms and evidence, is of paramount importance.

Such symptoms as tremor and nervousness in themselves have little diagnostic significance. That peculiar restless type of nervousness associated with unbounded confidence as manifested by the exophthalmic goiter patient in contradistinction to the neurasthenic with the assumed attitude of inability to do a thing even before trying is very important. This has been clearly described by W. A. Plummer and re-emphasized by me. This can be admirably tested out by asking both types to mount a high step, in which event the former finds the task impossible without assistance, while the latter accomplishes it without difficulty. Here we have manifested one of the very cardinal and diagnostic symptoms and designated as "quadriceps power loss." It is needless to say that its degree is in proportion to the amount of poisoning.

In exophthalmic goiter the circulatory mechanism is markedly disturbed. The peripheral vessels are dilated; in other words, we have an open periphery which allows for an increased elimination of heat, and from a blood pressure standpoint, a lowered diastolic reading. The patient as a result perspires freely and complains of feeling warm. This is not a temporary disturbance measured in periods of minutes or hours, but in periods of weeks or months. In other words, the patient in an ordinary room temperature feels continually abnormally warm. This is an extremely important symptom, and might be considered in the absence of fever as pathogno-

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monic. As exophthalmic goiter patients do not present a fever unless there is an accompanying infection, such as follicular tonsilitis which they are especially prone to, the feeling of warmth has an added significance and can only be explained on the basis of an increased metabolism, the latter, which in 95 per cent of patients without fever, as brought out by Boothby, speaks for exophthalmic goiter or thyrotoxic adenoma.

The increased metabolic rate which these patients present naturally results from an increased oxidation. To supply this destructive process nature compensates to some extent by encouraging the individual to take more food. Here we have another important symptom, namely, a ravenous appetite, which is present at least at some time and often throughout the course of the disease.

Nature does not absolutely compensate, however; in other words, the food intake, even though in excess of the normal, cannot keep pace with the catabolic process and we have another symptom, namely, weight loss, which together with ravenous appetite and an absence of any diabetic tendency is again practically pathognomonic of hyperthyroidism, as increased food intake with coincident weight loss is only to be found in this condition and in diabetes.

One of the peculiar tendencies of exophthalmic goiter is that it occurs in phases. In other words, there is that tendency for remissions during which time the individual may be only slightly toxic, or absolutely free from toxicity. The latter is open to question, and it is more likely that during remissions the disease is slightly active, but not sufficiently so to be productive of symptoms which we associate with frank hyperthyroidism. It is safer to assume that once hyperthyroid always hyperthyroid until measures for its eradication are carried out. After each wave of hyperthyroidism at least the inroads of the disease become more marked. From a diagnostic standpoint, at least, periods of lessened activity, or remissions, again speak strongly for exophthalmic goiter.

The physical examination gives very valuable evidence, as already stated, exophthalmos, especially bilateral, together with the eye findings, is absolute evidence. One should not mistake naturally prominent eyes for exophthalmos. A starry expression of the eyes is very suggestive. The thyroid usually has a granular feel. Its size may vary greatly, at times a barely palpable thyroid being present in patients with markedly increased metabolic rates.

The presence of thrills and bruits over the superior thyroid vessels occurs in about 60 to 80 per cent of cases, and when present are practically diagnostic. When louder over the inferior thyroid vessels, or when varying in intensity, being at times barely audible, their presence is of negligible value from a diagnostic standpoint.

The heart may or may not be enlarged. The cardiac damage is myocardial in character. A hoarse blowing systolic murmur loudest over the pulmonic area is often to be found.

While the toxemia involves all the muscles of the body, resulting in a generalized weakness, there is a special tendency for the quadriceps group to be involved much out of proportion to the other muscles.

Symptoms such as dyspnoea, palpitation, vomiting

and diarrhea, generalized loss of strength, headache, pressure and fullness over the thyroid, choking spells, etc., are usually present, but individually or even collectively are not diagnostic.

The tendency for exophthalmic goiter patients to develop crises is quite marked. The nature of the toxemia; the condition of the thyroid with its increased vascularity especially at this time allows for an explosive type of toxemia, which at times is of such a degree as to overwhelm the individual and thus result in the marked symptoms associated with a crisis. Contrary to the usual belief, patients in this state, as well as all patients with exophthalmic goiter, as already mentioned, do not have an elevation of temperature unless some complicating condition, more often a follicular tonsilitis, exists.

In the final analysis the metabolic reading is of vital importance in the determination of the degree of toxicity and especially in the diagnosis of borderline cases. According to Plummer, a clinical diagnosis cannot be made until the metabolic rate is 15 or above. Thus one can readily see that the metabolic reading is very important.

Repeated readings in doubtful cases and especially the carrying out of the test by one especially trained and under normal conditions is of vital importance. In a previous article I stated, "I have repeatedly seen patients who have previously been considered hyperthyroid on the basis of one reading, upon whom a subsequent reading would, I am sure, have been normal. As a matter of fact, a rate of plus 11 to plus 20 or 25, in my experience, on a rechecking proves in most cases to be within normal limit. There are isolated cases of hyperthyroidism presenting a low reading, but in these the symptomatology is in harmony with the rate and, as a matter of fact, they are quite often recognized clinically."

These points cannot be re-emphasized too frequently, as the tendency to base false conclusions on poorly carried out metabolic readings is becoming increasingly more prevalent.

That the portable apparatus adds to false interpretations cannot be denied, and especially when the test is made by one not conversant with the work.

Increased rates are constantly present in exophthalmic goiter and hyperfunctioning adenomas, in the active stage of acromegaly and in fevers. They may be found occasionally in other diseases, such as essential hypertension, pernicious anemia, leukemia, diabetes, bronchial asthma, decompensated hearts, tuberculosis, and carcinomas. In these conditions a rate of over plus 20 to plus 25 is quite unusual, although at times patients with pernicious anemia and leukemia may present a reading of plus 30 to plus 35. Little difficulty should be experienced, however, in differentiating these conditions from those of exophthalmic goiter.

The rapid response of exophthalmic goiter patients to Lugol's solution gives us what practically amounts to a therapeutic test. However, resorting to a therapeutic test to establish a diagnosis is, naturally, far from the ideal and this should rarely be necessary.

A discussion of the symptomatology as given really is also a discussion of the differential diagnosis. The conditions which exophthalmic goiter is most often confused with are neurasthenia and allied conditions,

such as neuro-circulatory asthenia, effort syndrome, as well as tuberculosis, and thyrotoxic adenoma. The latter has been established as a definite clinical entity by H. S. Plummer. It might be well to give some of the findings in this condition which differentiates it from exophthalmic goiter.

Adenomata have their origin around the 18th or 20th year and a period of fourteen to sixteen years ordinarily elapses before toxicity begins. Approximately only 10 per cent become toxic. Iodin therapy is absolutely contra-indicated in patients with non-toxic or toxic adenomata, as in the former toxicity may be initiated, while in the latter it may be aggravated. Where a superimposed exophthalmic goiter exists iodin preparations may be tried. Also where the diagnosis has not been definitely established between the two syndromes. This should be a rare exception, but does occur, especially in patients with exophthalmic goiter having a thyroid gland containing nodules.

Weight loss is more gradual, but may be extreme in severe cases. A ravenous appetite and feeling of warmth may be present, but not as constantly as in exophthalmic goiter patients. The increased diastolic blood pressure does not allow for the open periphery and the resultant amount of feeling of warmth. The quadriceps power loss is usually present. Nervous symptoms are not as marked. Crises ordinarily do not occur and remissions are not present, the disease being progressive. The physical examination does not show exophthalmos. Thrills and bruits are absent. Adenomata are easily distinguishable from the diffuse hyperplastic gland of the exophthalmic goiter patient.

In thyrotoxic adenoma also the heart is primarily affected; the disease is insidious in onset; and arterial changes occur, as manifested by increased diastolic and systolic blood pressure readings. Metabolic readings are not ordinarily as high. Ligations give practically no improvement. These are the most common differential points.

It must always be remembered that exophthalmic goiter has a symptomatology of some duration. The patient with this does not feel well today and poorly tomorrow, but there is a sustained feeling of ill health measured in periods of months and not in periods of hours or several days, as in the neurasthenic. It can readily be seen that the symptomatology of exophthalmic goiter, while diverse, still has certain symptoms such as the feeling of sustained warmth without fever; ravenous appetite with loss of body weight; quadriceps power loss; tendency to remissions, etc., which, one might say, are often individually and certainly collectively diagnostic.

#### DISCUSSION

**REA SMITH, M. D.** (Medical Office Building, 1136 West Sixth Street, Los Angeles)—Doctor Mark has given us a very clear and exhaustive description of the various signs and symptoms of exophthalmic goiter, all of which are important in the incipient and border-line cases.

Basedow's disease is characterized by marked waves of remissions and exacerbations. It has been recognized for years by surgeons that the time for operation was at the bottom of the wave, and the older surgeons became very expert in determining the amount of toxicity by the symptomatology. Now with the basal metabolism test we have a more positive means of determining the position of our patient in relation to the waves of toxicity.

The border-line and incipient cases are subject to the

same remissions and exacerbations as the fully developed cases, and I think that the failure to remember this fact has much to do with the missed diagnoses and diagnostic controversies. Patients will go along free from symptoms, except perhaps for a slightly accelerated pulse or a pulse rate accelerated by too slight nervous stimulation when an emotional disturbance precipitates a shower of real symptoms. The muscular weakness as demonstrated by quadriceps power loss is probably the most constant sign during the remissions.

The failure to diagnose exophthalmic goiter is not to my mind so disastrous as the failure to differentiate between a group of symptoms well developed due to exophthalmic goiter from an equally well-developed group of symptoms due to thyrotoxicosis from a degenerating adenoma. The delays of medical treatment and therapeutic tests in these cases do patients infinitely more harm than in true exophthalmic goiter.

**WILLIAM W. WASHBURN, M. D.** (Fitzhugh Building, 380 Post Street, San Francisco)—Doctor Mark has given us the essential differential points between hyperthyroidism due to exophthalmic goiter and adenoma.

While exophthalmos is said to be present in but 60 to 70 per cent of proven Basedow's disease, it seems altogether too low unless we include cases in their very incipiency. Exophthalmos, though sometimes waiting to make its appearance in the secondary stage of the disease, is with "tumor" and tachycardia the most important of the so-called cardinal signs and symptoms. I have seen but one patient with a toxemia sufficiently severe to warrant operation in which exophthalmos was absent. It is likely that many cases in which exophthalmos is absent, in the presence of thyrotoxicosis are not a true Basedow but adenoma which have not been recognized.

I have seen patients in thyroid crises with high temperature which could not be explained except upon the basis of extreme thyrotoxicosis. Here we have an extremely high metabolic rate, and with these rapid chemical processes heat production is not counterbalanced by heat dissipation through physiological processes as body radiation, sweating, respiration, etc.

Mark has emphasized the marked variations which are so frequently observed in pulse rate, blood pressure, and basal metabolic readings. The nervous and mental state in this disease is characterized by emotionalism, irritability, restlessness and instability, and all of these features are subject to wide variations. The pulse rate and blood-pressure reading taken at the first office visit is most unreliable, often 20 to 30 points higher than when obtained after the patient has become accustomed to the office environment or when taken at the home.

Basal metabolic determinations as pointed out by Doctor Mark must often be repeated. One is often to be misled here as with similar laboratory proceedings in other fields of medicine; yet taken in conjunction with other clinical signs and symptoms it is the best guide we have to determine if hyperthyroidism is present as well as its severity.

Weight loss and increasing appetite are important signs secondary and proportionate to our elevated metabolic rate; likewise "quadriceps power loss" is an indication of generalized muscular weakness, an important and almost constant finding which is too frequently overlooked. It is in the border-line case that all the signs and symptoms which Mark has elicited will help to establish a correct diagnosis. While some of these borderline cases, which are of course incipient cases, may remain border line for some months, this is not the rule; while in the course of a few weeks or months, a superimposed acute infection, psychic shock or overwork, our diagnosis is no longer in doubt.

**DOCTOR MARK (closing)**—The symptoms which I have outlined as being practically diagnostic of exophthalmic goiter were first brought to my attention in 1917 while in the goiter department at the Mayo Clinic. H. S. and W. A. Plummer had repeatedly emphasized the importance of these symptoms, and had developed them after observation of a large number of patients. As some physicians are unfamiliar with these symptoms, and as I have not seen mention of them made in textbooks, I considered it advisable to discuss them.

I cannot agree with Doctor Washburn regarding his statement of exophthalmos. Charles Mayo places the

number of exophthalmic goiter patients developing this findings at around 60 per cent. In fact the frequency with which exophthalmic goiter exists in patients showing no exophthalmos gives one the impression that the syndrome is improperly termed. What I wish to bring out especially is that true exophthalmic goiter patients often, irrespective of the degree of severity, in approximately 40 per cent of cases, never develop exophthalmos. True thyrotoxic adenoma never develop exophthalmos unless exophthalmic goiter is superimposed.

I also disagree with Washburn regarding the presence of an increased temperature in patients with exophthalmic goiter. As brought out in my paper, an increase in temperature does not occur from the hyperthyroidism unless an accompanying infection, more often a follicular tonsillitis, exists. Confusion in this respect has been due largely to the fact that patients with exophthalmic goiter have an increased metabolism reading and subjectively feel warm and perspire.

### INFECTIOUS MONONUCLEOSIS WITH REPORT OF FIVE CASES

By H. E. BUTKA \*

*Infectious mononucleosis is a definite disease entity. Its onset and general findings are somewhat similar to acute lymphatic leukemia. The early enlargement of the lymph nodes, the sore throat, often with the findings of streptococci on culture, the marked increase of the total white cell count, the brief duration of the high count, the inversion of the ratio of the polymorphonuclear and the mononuclears, the gradual return to normal, with absence of gingival and subcutaneous hemorrhages and any marked anemia, serve to give us a picture that should not be confused with other more serious conditions.*

DISCUSSION by Newton Evans, Loma Linda; A. M. Moody, San Francisco; Gertrude Moore, Oakland.

DURING recent years several articles have appeared in various medical publications describing infectious mononucleosis under various names. Bloedorn and Houghton suggested the name, acute benign lymphoblastosis; that most commonly used in America during recent years, infectious mononucleosis, was suggested by Sprunt and Evans in 1920. These authors, as well as many others, believe the condition is synonymous with a disease better known by our older colleagues under the name glandular fever, originating with Pfeiffer in 1889.

It is interesting to note that the disease appears in epidemic form, somewhat similar to influenza. During a period of some twenty years the disease was extremely rare, and only in the last few years has the attention of physicians again been called to it.

There is a noticeable similarity in the blood findings of this disease and of certain types of leukemia. Consequently, several reports of patients suffering from leukemia with recovery, unfortunately have gained entrance to medical literature.

Morley and Tidy traced the history of infectious mononucleosis to 1921, and Tidy later discussed an interesting epidemic of twenty-four cases.

In a recent article Ruth Gilbert and Marion B.

Coleman gave an account of an epidemic of glandular fever, covering a period from October, 1923, to May, 1924, with partial laboratory findings in over one hundred cases. However, only a few cases were satisfactorily studied.

Infectious mononucleosis is a disease entity belonging to the acute infectious and contagious diseases. Its incubation time is about twelve days. It affects children and young adults, but may affect older individuals. Many of the cases reported were medical students. The chief findings are: a generalized enlargement of the cervical glands, with a less constant and marked enlargement of the axillary, inguinal and abdominal lymph nodes, and splenic enlargement. The glands may be tender but are not painful. The fauces are reddened, are at times covered with what appears to be a membrane, and may be acutely painful. There is a preliminary period of malaise. The glandular enlargement appears about the third day and reaches a maximum in from one to three days. With the glandular enlargement there is a pyrexia, which is usually about 103, but may reach 105 for a day or two. It rarely exceeds 100 for more than a week. The prominent glands may subside in from five to fifteen days but may relapse, or if unilateral may occur on the opposite side. Suppuration is extremely rare and when it occurs is due to secondary infection. Glands may remain palpable for several weeks, occasionally for months. After the acute stage there is usually a prolonged period of depression for weeks or months, with some anemia. Recovery is finally complete with a negligible mortality. Occasionally there is a complication of hemorrhagic nephritis, usually without other signs of kidney disease. This occurs in about 6 per cent of cases.

The leucocyte count is increased in all cases during a definite but short period of the earlier part of the disease, the highest total count reported being 35,000, while the highest percentage of mononuclear cells found was 97.5 per cent.

In Longcope's series of ten cases reported in 1922 a rather comprehensive study was made. He described the following histologic characteristics of the mononuclear cells of the blood:

1. "A small mononuclear leucocyte identical with the small lymphocyte seen in the normal blood."
2. "A large mononuclear cell identical with the large mononuclear and transitional types found in normal blood."
3. "Mononuclear cells of a type not usually found in normal blood."

"It is the third type of cell that predominates and to which particular interest is attached. In the cases reported, these cells were somewhat larger in size than the small lymphocytes and contained oval, kidney-shaped, slightly lobulated or Reider-typed nuclei, staining deeply with Wright's stain. They were usually without definite nucleoli and were often concentrically placed in the cell. Sometimes the nucleus almost filled the cell, but at other times it was surrounded by a fair amount of basophilic protoplasm of ground glass appearance, which did not contain any definite granules. These cells varied somewhat in size and shape, and frequently it was difficult to differentiate them on the one hand from small lymphocytes and on the other from the large

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mononuclear cells. Occasionally mononuclear cells were observed with eccentrically placed nuclei and deeply stained basophilic protoplasm. Such cells resembled very closely the so-called stimulation form of Turck. In three cases the oxidase reaction showed mononuclear cells free from granules. Though a few of these mononuclear cells presented somewhat the appearance of myeloblasts, the absence of the oxidase reaction served to differentiate them from this cell, and it seems highly unlikely that they are derived from the myeloid tissue and much more reasonable to suppose that they arise from true lymphoid tissue."

With convalescence and a decrease in the leucocytes these abnormal cells gradually disappear from the blood.

Lymph nodes were exercised in two of Longcope's cases. The sections revealed hyperplasia of a type simulating Hodgkin's disease.

To the sixty or more cases reported in the last few years with more or less complete laboratory data, I wish to add five that have come to my attention during 1923 and 1924. Not being hospital patients much desirable data is missing, sufficient, however, being present to establish a definite diagnosis.

#### CASE REPORTS

##### CASES Nos. 1 AND 2. Miss L. H. and her mother, February, 1923.

Daughter ill first for a period of about two weeks. Began with glandular swelling in the cervical region. Soreness of tonsillar and throat regions developed about two days after the glandular enlargement; no leucocyte count made; convalescence rapid.

Mrs. H., age 65, housewife. Onset about two weeks following the daughter's illness with glandular swelling, a sore throat developing two or three days later. Edema of pharynx so marked that she could scarcely swallow water. Cultures negative for diphtheria. White count made at height of illness revealed 29,000 leucocytes, but no differential slides were obtained at this time. Two days later count had dropped to below 20,000, at which time a differential count was made, revealing mononuclears amounting to approximately 45 per cent. Recovery fairly rapid, but requiring about four weeks in all, patient being confined to her bed for about two weeks.

CASE No. 3. Mr. J. W. H., age, 21, male, American, student. Onset rather gradual with symptoms of la grippe or cold. After these symptoms persisted for three or four days he began to develop enlargement of cervical, axillary, and inguinal glands. Two or three days after this swelling came on, throat became sore and swollen with lesions confined chiefly to the tonsils. Temperature varied up to 104 and 105, and patient became delirious. Jaundice developed with marked tenderness and enlargement of liver and spleen.

At this time, November 13, 1923, blood count revealed the following: white count, 48,000; polynuclear cells, 12 per cent; small lymphocytes, 15 per cent; large lymphocytes, 48 per cent; large mononuclears, 21 per cent; Reider cells, 3 per cent; eosinophiles, 1 per cent; making a total of mononuclear cells of 87 per cent.

During the course of the disease, patient had three epileptiform seizures, lasting only a few minutes each time. An eruption about November 18 which simulated measles with a slight suggestion of scarlet fever. This subsided in a few days and patient began to exfoliate. This continued on for about two weeks, much like scarlet fever, with sheets of scales coming off the hands and feet.

Convalescence rapid and blood count made six weeks after onset of the disease was normal.

CASE No. 4. Dr. D. D. C., physician caring for cases 1, 2, and 3.

Several days before taking first blood count patient felt

indisposed with some soreness of throat. This became more severe and after a few days marked swelling of the lymph nodes over entire body was noted, and especially marked in cervical and submental regions. Low-grade fever present but not sufficient to keep patient confined to bed. Blood count made about December 20, 1923, revealed 27,000 leucocytes, but no differential count was made. Two days later complete count was made, revealing no decrease in red cells but marked changes in the whites, which numbered 19,000 cells, 20½ per cent polynuclear cells with 78½ per cent mononuclear cells, 70 per cent of which consisted of the large mononuclear variety consisting of many lymphoblasts and Reider forms. Counts were repeated at three- and four-day intervals, revealing on December 24, 14,300 cells with 22 per cent polynuclears and 78 per cent mononuclear cells; December 27, 16,000 cells with 14 per cent polynuclears and 80 per cent mononuclears. Another count made on December 31 gave 42 per cent polynuclear cells with 58 per cent mononuclears. Last count made some days later revealed almost normal relations of the various elements.

Fever continued for about two weeks with marked glandular swelling. This gradually subsided with a decrease in the cell count. Throat was extremely sore and revealed a firm whitish membrane over each tonsillar fossa, which was hard and dry to touch. It was difficult to remove any portion of membrane and smears failed to reveal spirochetes. Cultures revealed a pure culture of a streptococcus nonhemolytic in character, and showing a dirty brownish discoloration of blood agar.

Symptoms gradually subsided and patient returned slowly to normal. Entire time occupied by disease, about four weeks. Blood cultures were not made.

#### Blood Counts—All Kinds

Date	Reds	Whites	Polym.	Sm. L.	Monos. L.	Trans.	Total	Monon-	clear
Dec. 20		27,000							
Dec. 22	4,960,000	19,000	20½	3	70½	5	79½		
Dec. 24		14,240	22	5	70	3	78		
Dec. 27		15,840	14	18	64	4	86		
Dec. 31		8,600	41½	7½	46	5	58½		
Jan. 6		7,400	61	15	22	2	39		

CASE No. 5. Mrs. R. W., age 24. Illness began on a Friday of September, 1924, with an apparent swelling on her face and lips. Patient says she thought it was lymph channels (having been a student of medicine). The same evening the swelling was quite marked. No evidence of enlargement of the glands. Next morning the swelling disappeared, but large areas of urticaria developed which cleared on taking a soda bath.

The second day the cervical glands began to enlarge and became about the size of walnuts. They were but slightly tender. The axillary and inguinal glands were also enlarged.

Patient's temperature gradually rose to 103 in the afternoon, coming up in a typical stepladder manner, lasted five days and subsided by lysis.

The third day the most distressing part of her complaint began, consisting of an extremely sore throat. A culture was made but found to contain no diphtheria organism, and a stained smear from slant revealed only cocci, type undetermined. Throat symptoms lasted for about two weeks.

The course of the disease was four weeks, and after a period of three months the patient feels perfectly well, although glands are still palpable.

Stools as described by patient were red with blood at times, but not confirmed by laboratory examinations.

Oxidase reaction proves cells to be of mononuclear and lymphoid origin.

#### COMMENT

Few blood diseases present such a striking picture. The early glandular enlargement, symptoms of discomfort in the mouth, and the blood picture presents the chief findings in cases of that dread and fatal disease, acute lymphatic leukemia as well. In fact, at times the course of the dis-

Date	Hbg.	Red Cells	White	Polys.	S. L.	L. L.	Eos.	Bas.	Tr.	Total Mono. Count
9/21/24	95%	5,470,000	18,100	16	75	4			5	84
9/22/24			18,200	18	66	7			9	82
9/24/24			13,500	18	76	4			2	82
9/27/24			7,550	33	56	6.5			4½	67
9/29/24			6,500	31	58	8	1		2	69
10/ 1/24			5,000	40.5	43.5	5	1	.5	4½	58
10/ 3/24			5,700	41	50	4	1	1	3	56
10/ 7/24		4,930,000	6,650	49	34.7	4	2	.3	8	49
10/12/24			4,100	47	44				9	53
10/19/24			3,700	28	61	6	2	1	2	69
10/28/24			6,250	36	50		6 Pol. M.	37½	5½	62
10/21/24			11,000	63	34					34

case alone will give a final diagnosis and prove the benignity of the condition.

Case No. 3 presented the most difficulties. This case was probably complicated by other conditions. Here we found the highest count on record in this disease, 48,000 per cu. mm. Pathologists and other consultants were of the opinion, that acute lymphatic leukemia was the correct diagnosis. In spite of the predicted fatal termination the patient recovered and at the present time is normal in every way.

Many patients with this trouble remain undiagnosed on account of the moderate nature of the symptoms and the lack of careful study given to the laboratory findings. A simple leucocyte count will reveal an increase in cells, but the variety remains unknown, due to failure of a differential study. The period of leucocyte increase is not of long duration and the patient soon recovers, the symptoms being ascribed to any one of a number of common infections of the nose and throat.

#### DISCUSSION

NEWTON EVANS, M. D. (Loma Linda, California)—Doctor Butka has rendered a distinct service in calling attention to this interesting condition and, perhaps most important, in warning of the danger of confusing the condition with lymphatic leukemia. It is valuable to know that there is a condition which is so very similar to leukemia for which we must be on the lookout. As I see it, the most helpful, practical criterion in the differential diagnosis is the fact that, as a rule, the total leucocyte count in the infectious mononucleosis is not over 35,000. One of Doctor Butka's cases had a maximum leucocyte count of 48,000. It is an important question whether, as he suggests, this may have been due to some associated condition and was not an essential characteristic of the disease itself. If counts running up to 50,000 may be expected in infectious mononucleosis this fact will in itself make discrimination from lymphatic leukemia the more difficult.

This symptom complex, which is obviously an infectious process, presents another of that group of infectious diseases which are still unsolved problems as to etiology. Its comparative rarity makes it the more difficult for bacteriological study. It is to be hoped that some worker will be so fortunate as to have the opportunity and the ability to solve this problem. Its apparent slight tendency to produce any mortality would make it seem inconsequential, but the fact that it produces a definite period of morbidity with a prolonged convalescence, constitutes it as a disease of decided importance.

A. M. Moody, M. D. (Saint Francis Hospital, San Francisco)—Doctor Butka's article is of considerable interest, as anyone directing laboratory work must from time to time come in contact with blood counts such as are here recorded. It has been my good fortune to observe a small number of these cases and to be able to differentiate them from lymphatic leukemia, which is important from the stand-point of prognosis.

The important laboratory point in differentiation is the presence in blood smears of many irregularly staining, degenerating and smudged types of mononuclear cells, together with a very high percentage of lymphocytes. Such blood pictures do not occur frequently, which, perhaps, can be illustrated by the fact that in over 4500 differential blood counts made in the Saint Francis Hospital laboratory since June 1, there is but one occurrence of this condition.

This patient was from outside the hospital and one count only was taken.

The question of whether the disease should be called "infectious mononucleosis" or "acute glandular fever" seems to me to be unimportant. However, the term "acute glandular fever" is in keeping with the anatomical lesions present, whereas the mononucleosis undoubtedly is the result of, and therefore incidental to, the acute involvement of the lymph glands in this condition.

GERTRUDE MOORE, M. D. (Western Laboratories, Oakland, California)—In spite of its infrequency, infectious mononucleosis must always be borne in mind whenever one is tempted to make a diagnosis of acute lymphatic leukemia at the beginning of an illness which has as its outstanding symptoms fever, enlarged lymph glands, and a high absolute and relative mononuclear count. In order to avoid the error of a hopeless prognosis in these cases, we must watch developments and make repeated blood examinations until thoroughly typical blood changes have been demonstrated, for the blood changes in acute infectious mononucleosis are so similar to those of acute lymphatic leukemia as to deceive the most experienced hematologist at times. However, I believe the following points are helpful in the differentiation of these two conditions: First, the abnormal cells which are of the germinal center type of lymphoblasts have a wide variation in size, ranging from a cell distinctly smaller than the normal lymphocyte to one three or four times the size of a red blood cell; second, their protoplasm is homogeneous and stains deeply in acute infectious mononucleosis, while in acute lymphatic leukemia both cytoplasm and nucleus show poor staining reaction; and, third, degenerated and fragile forms are frequent in leukemia but very infrequent in acute infectious mononucleosis. The final diagnosis can only be made when, in true leukemia, the blood count climbs to a point above 50,000, or, in acute infectious mononucleosis, drops gradually to normal with an accompanying subsidence of all symptoms.

DOCTOR BUTKA (closing)—The comparative rarity of this disease and the absence of an appreciable mortality contribute to the present day lack of knowledge regarding its true etiology. It is definitely infectious, but the nature of the offending organism is not known. Further investigation along this line will be made as opportunity arises.

During the recent session of Congress 17,800 bills were introduced—13,251 in the House, 4549 in the Senate—which breaks the record of the session two years ago, when 13,294 separate bills were proposed. Running debate on the floors of the two houses and speeches printed but not delivered used 13,000 pages of the "Congressional Record." Two years ago, at a comparable session, the Record ran a little under 12,000 pages.—Nation's Business.

The truth is that the thought of America is fashioned in great part by the republic's editors. Editors give counsel which makes for the republic's betterment; editors, in expressing their own views, tend to mold the views of their readers. Often they say coherently and forcefully what others of us have been thinking incoherently, and so give form to our thoughts and enable us the better to weigh them.—Hon. Thomas J. Lennon, Justice Supreme Court of California.

### THE LATE NODULAR SYPHILIDE

By DOUGLASS W. MONTGOMERY, M. D.

DISCUSSION by Harry E. Alderson, San Francisco; Anstruther Davidson, Los Angeles; Thomas J. Clark, Oakland.

*Sigma monumenti revocans in memoriam iniquitatem*, a memorial stigma bringing iniquity to remembrance.

The efficiency of the Wassermann reaction in detecting the presence of syphilis, and the success of arsphenamine in clearing up luetic lesions of the skin and mucous membranes is so marked that the importance of the clinical diagnosis of these interesting manifestations would seem to be diminished. Numerically this is so, as between 80 and 90 per cent of those afflicted with late lesions of the skin give a positive reaction. *The very success of the Wassermann reaction, however, makes it all the more desirable to be able to make the diagnosis clinically when it fails.* In practice we find it more and more frequent for both the physician and the patient to rely unqualifiedly on the laboratory diagnosis, which is a great evil.

Not long ago we had a patient with late active lues in the nose, in the roof of the mouth, and in a toe, and yet her serum reaction was negative. As practicing physicians we all are aware of the moral value of a positive, unshakable diagnosis as a support in carrying out an efficient, continuous line of treatment, and this support may be obtained equally well from the clinical manifestations as from the laboratory findings.

Then there are cases in which the patient may suffer from two different lesions, and it becomes eminently desirable to be able to say that one of these will heal expeditiously under the treatment, while the other will not do so.

There is still another weighty reason for rehearsing the clinical features of the late syphilitides at every convenient opportunity. The success of arsphenamine in clearing up the lesions of the skin and mucous membranes, or in preventing their appearance, is so great that the occasions for seeing them have become quite infrequent. Even in large clinics teachers complain of the paucity of material for demonstration. It is therefore desirable to make the best use of the few chances available, and one can only do so by being prepared for the event.

The late nodular syphilide used to be called the tubercular syphilide because it was usually larger than the early papule and more sluggish in its course, but since so many nodular cutaneous affections have been recognized as appertaining to tuberculosis, the epithet "tubercular" has been dropped from the spirochetal affections entirely, as leading to confusion.

The late syphilitic papule, or nodule, both anatomically and etiologically, is the same as the early papule of the widespread papular or papulopustular rash. I well remember how surprised I was in sectioning a papule from a patient with a rare early miliary syphilide in the old Polyclinic to find that anatomically it was a minute gumma, even to the presence of giant cells, and a gumma is nothing more than a large, deeply situated, solitary nodule.

The greatest incidence of the late nodular syphilide is about the third year of the disease, but it may

occur even in the first year, and it has been known to appear as late as fifty-five years after the primary lesion (Fournier).

The nodule of syphilis is a little tumor, and this should always be borne in mind in considering a diagnosis. It is generally about the size of a small pea, and it has the substantiality of a tumor, both to the eye and to the finger. It looks to be, and really is, well set in the true skin, and may extend below it into the subcutaneous tissue. Its surface may be intact, rounded and smooth, and its characteristic color is deep red or that of raw ham, but it may be bright red. If it occurs as one sole lump or nodule, or a few such widely scattered, I do not know how to make the diagnosis clinically, but it seldom so occurs, except as a very large node, when it tends to central liquefaction and on opening discharges a glairy pus, and is called a gumma. Even here the resemblance between a syphilitic gumma and a tubercular gumma may be too close to differentiate. The course of the tubercular lesion is usually slower than that of syphilis, and the infiltration is usually softer. We have such a case under observation at present. The late nodular syphilide usually occurs as one of a group, and then its characteristics may be so distinctive that any well-trained physician may make the diagnosis. Like everything organic the luetic nodule grows to a size limited by its nature and then recedes.

The nodules of any group are all of different ages and therefore of different sizes, and their general appearance also differs with their age. An individual nodule may pass through its whole life cycle in or under a superficially intact skin, or possibly only give rise to some desquamation as an evidence of its inflammatory nature, and may disappear, leaving no surface evidence of its previous existence, or it may cause a scar. The presence of these scars in a nodular patch is of great diagnostic value. Individual nodules will almost certainly liquefy in the center, and in opening on the surface give rise to small steep-edged ulcers with a dirty grey base.

Instead of appearing as individual papules the late nodular syphilide may develop as a solid, continuous infiltration with a smooth, even surface and a definite border, just as tuberculosis may develop as an infiltration instead of separate tubercles. This type is rare, however.

#### THE ARRANGEMENT OF THE PAPULES

Notation of the arrangement of the papules is often most important, as on it may depend the diagnosis.

In contrast to the early papular eruption, which is bilateral as becomes a disease scattered universally by the blood current, the late nodular eruption often shows decided bilateral asymmetry.

We have before spoken of grouping as another peculiarity of diagnostic value, but the papules in the bunch may be numerous and well set apart, and may exhibit no arrangement whatever, constituting what may be called a "buckshot group." Many of the papules may break down into small circular steep-edged ulcers, some of which may be covered either with a yellow or with a black tightly adherent crust, while others will have healed, leaving white or



Circular ulcer of late syphilis. A band of epithelialization may be seen extending from about 5 o'clock on the circle toward the central nub, which will presently transform the circular ulcer into a kidney-shaped one.

reddish brown scars. The variegated appearance of the field may be imagined.

A nodular syphilide may begin as a single nodule, and then others may arise immediately around it, so spreading out continuously from the original center. The spread, however, does not usually take place in an even circle; only a segment remains active, forming an advancing wall, invading the normal skin. Ulceration follows the wall, so that a crescentic lesion is formed with an advancing bow-shaped indurated wall, within which there is a crescent-shaped ulcer, in the hollow of which there is scar tissue. This is the typical syphilitic horseshoe-shaped ulcer with the indurated border of raw ham color. This is the lesion so often mistaken for either lupus or epithelioma, but which is so much more rapid in its course than either of them.

In the development of such a patch quite a variety of grotesque figures may be formed. For instance, Gougerot recently showed a photograph in which two bows joined, forming the letter "S," as if the disease were trying to write its own signature, and recently I saw a crescentic ulcer in which the two horns of the crescent had met, forming a circular ulcer with a nub of sound skin in the center. Subsequently the healing began at one point on the edge and extended toward the central nub, as may be seen in the photograph. This circular ulcer will presently, therefore, again become a crescent-shaped one.

#### THE SITUATION OF THE LATE NODULAR SYPHILIDE

These syphilides have their favorite situations, and in their order of frequency they occur on the face,

especially on the wings of the nose, about the mouth, and on the forehead. On the forehead they may occur along the hair line, causing the corona veneris of the tertiary period. Next in frequency of location comes the palmar and plantar surfaces, the thighs, nape of the neck, posterior surface of the forearms, and the scapular and lumbar regions of the back. They may occur on any part of the cutaneous surface, but it is apparent from the above that the trained observer will pay particular attention to any destructive lesion about the nares, mouth or forehead, to see if by chance any additional signs of syphilis may be discovered.

#### SUPERINFECTION AND CRUSTING

The tissue of a late syphilitic nodule is diseased and of low resistance, and it is situated near the surface, and therefore is readily attacked by pyogenic bacteria. Under these conditions desquamation, ulceration and crusting are natural consequences.

#### THE ULCER RESULTING FROM THE SOLITARY NODULE

The solitary nodule may break down into an ulcer with a definite indurated border, on the surface of which the pus tends to dry, forming a crust. The spirochete is strongly inclined to attack the blood vessels, and I suppose it is because of this that the pus is so frequently mixed with blood. The admixture of blood makes the crust dark brown or black, and very tough. It is also very adherent and fits within the border of the ulcer like a watch crystal in its setting. As the ulcer extends the crust becomes larger, and at the same time rises above its base, and so takes on a roughly pyramidal shape, resembling an oyster shell. The indurated border and the black tightly adherent, accurately fitting, thick, rough pyramidal crust form a striking and characteristic picture.

#### THE DESQUAMATION AND CRUSTING OF THE GROUPED NODULAR SYPHILIDE

The nodules, as before remarked, may be grouped, but irregularly scattered. They may, however, be closely agglomerated so as to form a continuous desquamating surface, in which case the diagnosis may be impossible to make. I remember well an incident in the old Toland Clinic at North Beach that made a great impression upon me. A woman had what appeared to be an indurated eczema on the side of the nose near the eye, for which I prescribed ammoniated mercury ointment. At the next visit, a week later, the lesion had so cleared up as to show plainly its nodular character, and then I discovered several other stigmata of lues that had previously escaped my notice. It was a good illustration of the clinic axiom that one finds what one looks for.

The crusting may be impetiginous, and so thick as to completely hide the subjacent definite luetic symptoms, and so give rise to an erroneous diagnosis of impetiginous eczema, or of impetigo. In any doubtful case nodules and scars should be sought for.

One must also remember that it is impossible to tell beforehand how much real loss of substance has taken place under a crusted syphilide, and it is often

advisable to warn a patient of this, lest he blame the treatment for the deformity.

#### CONDYLOMA LATUM

When luetic papules occur on approximated surfaces of the skin or mucous tracts where they are kept warm and moist as in the vagina, between the labia, and in fat people in the groins and in the axillae they assume a different aspect.

They are steep-edged elevations, flattened on top, and are called condylomata lata, or flat venereal warts, in contradistinction to the condylomata acuminata, or pointed warts, with which they may be associated but which have a different etiology.

Condylomata lata usually occur in early constitutional syphilis, and used to be frequently met with. Since the introduction of arsphenamine they are rarely seen, and with their disappearance has gone the greatest danger of infection.

It is important to notice that here again we have a solid, broad, substantial lesion such as is so frequently found in syphilis.

The acuminata wart may arise from any irritating discharge, such as gonorrhea, or that from pyogenic bacteria, and are therefore frequently adventitious to the broad luetic warts. Because the acuminata warts so frequently owe their origin to the irritation of gonorrhreal discharges, or to streptococcal infection on a luetic base, many associate them obligatorily with venereal disease. It is very especially worth noting, however, that they may occur on the privates during pregnancy without any venereal disease whatever. Years ago I saw with Dudley Tait a patient who, being pregnant, had nonvenereal acuminata warts of the genitalia. An injudicious practitioner had previously seen the patient, and had designated them as being venereal, with what might have been the most deplorable consequences.

#### SCARS FROM THE LATE PAPULAR SYPHILIDE

Scars following this form of syphilide are often characteristic. When recent they are frequently maculated reddish brown, because of the blood pigment they contain, a result of blood extravasation due to spirochetal injury to the blood vessels. For the same reason they may be bordered in brown. This brown pigmentation is most frequent and most persistent in lesions of the legs, especially of the lower third. After a time the scars become smooth, pliable, and white. Of course, scars are almost always unilateral, and solitary or grouped. A group of ulcers may become confluent and the resultant scar may be quite large, and have a polycyclic border, following in this respect the outer contours of the component ulcers.

A unilateral group of small scars on the forehead, or to one side of the vertebral column, or to one side of the sternum may be due, not to syphilis, but to herpes zoster.

In regard to scars of the leg, those of the lower third may be ascribed to *ulcus cruris*, but those of the upper third, and especially about the knee, when not due to traumatism, are strongly suggestive of *lues*.

Enough has been said to indicate how many different clinical pictures may be produced by the differences in behavior of the purely spirochetal lesions themselves, and then add to these the differences pro-

duced by the superinfections, and those due to the constitution of the patient affected. It would be impossible to enumerate them. Often in descriptive work one has to take up the parts of a picture, frequently to utterly fail to convey the picture as a whole. The only way to keep the parts together in clinical pictures exhibiting such a variety is to constantly recur to the well-known pathology of syphilis and to the symptoms we know to be produced by the spirochete in the tissues, and these are the solidity of the infiltration, the prominence of the lesions, the tendency to grouping, the often concentric advance and fairly rapid progress, the painlessness, the ulceration, and the scarring.

#### DISCUSSION

HARRY E. ALDERSON, M. D. (490 Post Street, San Francisco)—Doctor Montgomery in his usual interesting and instructive manner has called attention to the clinical diagnostic features of nodular syphilides. He mentions the very great importance of not neglecting the clinical side of dermatology. Our present laboratory aids are indispensable, but the same may be said of our clinical observations. To depend blindly upon the laboratory or clinical findings alone is a serious mistake.

Typical nodules (or gummata) of this type are, to the experienced physician, diagnostic of *lues*. We frequently begin treatment of these patients while awaiting the result of the Wassermann and never have failed to see our diagnosis confirmed either serologically or therapeutically. We are indebted to Doctor Montgomery for this timely appeal and interesting description of a type of luetic skin lesion that all should be familiar with.

ANSTRUTHER DAVIDSON, M. D. (419 South Alvarado Street, Los Angeles)—Doctor Montgomery has emphasized the necessity for accurate clinical diagnosis of nodular lesions in those ulcerations that are Wassermann negative or weakly positive. In such cases, to determine whether lesions around the nostrils are syphilitic or cancerous, is difficult and the diagnosis is wholly dependent on those features the author so clearly points out. There is little room for discussion on a paper on the contents of which we are all in agreement. I would like to add that while the scarring produced by a nodular syphilide is very characteristic, it is almost impossible at times to differentiate it from those produced by blastomycosis or the superficial form of sporotrichosis.

THOMAS J. CLARK, M. D. (Oakland Bank Building, Oakland)—Doctor Montgomery in his interesting review of the salient points of nodular *lues* stresses some capital reasons for close observation of skin lesions so that the physician may strengthen his diagnostic acumen.

Doctor Montgomery's training was in the school where observation, comparison, careful analysis of the course of events, and the search microscopically for the minute structure of lesions was the evidence to be secured to warrant his diagnosis. This habit of thought in gathering clinical points does give results. We feel assurance to have a master say, this is *lues*, or epithelioma or lupus.

Careful habits of search for clinical evidence is the school producing such men as William Osler.

It is interesting to see the persistence of syphilis and we do well to keep our judgment balanced about this feature. It is easy to ascribe all obscure pathology to syphilis. If we remember, the course of the disease is so well defined in the majority of cases it gave rise to the clinical arrangement of primary, secondary and tertiary periods, these different periods showing a rather acute local process of inflammation, followed by a widely distributed or generalized inflammatory reaction which gradually subsided to a local disturbance in the tissues. Montgomery calls our attention to these features of the tertiary nodulation—color, asymmetry of distribution, lack of pain, scarring, and a more rapid course than that of lupus or epithelioma.

The percentage of successful diagnosis of syphilis is highest during the secondary or generalized stage. This is followed by more or less active treatment. With the

tertiary lesions the percentage of positive blood findings drops sharply, so it is very important to recognize the disease by its clinical characteristics.

Doctor Montgomery's broadminded attitude of using these cases of tertiary syphilis to educate the younger medical men is commendable.

## QUANTITATIVE ESTIMATION OF ALBUMIN IN URINE

By A. M. MOODY AND LOUISE STOCKING

(From the Laboratory of St. Francis Hospital,  
San Francisco)

**T**HIS paper relates the details of an accurate and rapid method for the quantitative estimation of albumin in urine. The discussion is limited, first, to a brief review of the inaccuracy and delays encountered in using the ordinary textbook procedures and, second, to the technical aspect of the test, without any consideration of the pathological significance of albuminuria.

In February, 1925, a patient in whom we were especially interested developed an albuminuria of such a high degree that it was impossible to obtain a reading on the Esbach tube without diluting the original specimen. This was done with water, although most textbooks simply state "to dilute," but do not specify the diluent. Our readings seemed somewhat large, so we set up a series of dilutions and found that as the dilution increased we obtained greater estimations of albumin. The results when compared with gravimetric determination on the same specimens proved the inaccuracy of diluting urine with water. Those interested in laboratory analyses are aware of the fact that the Esbach determination of albumin in urine gives only an approximate estimation, requires twenty-four hours' time, and is influenced by many factors, yet it is probably the most widely used method.

Since we now know that diluting urine with water increased the inaccuracy of albumin determinations by the Esbach test, and since we did not think that the gravimetric or other known accurate quantitative methods were practical as routine procedures, we set out to find something which could be relied on to dilute urine without disproportionately altering the albumin content.

Many fluids were tried, including the following: Albumin free urine, Tsuchya's reagent, 2 per cent acetic acid, various strengths of alcohol, sodium chloride solutions (2 per cent to .85 per cent), and others. In brief, all the above solutions as diluting fluids were found to yield inaccurate results. Tsuchya's reagent or alcohol used as diluting fluids decreased disproportionately the albumin estimation. Beginning with 2 per cent sodium chloride and decreasing to a concentration of .85 per cent, inaccurate results were obtained similar to those when water was used as diluent. We noted, however, that 2 per cent sodium chloride yielded results which were more promising.

At this point in our work we discovered that Doctor Wykoff of Stanford University Hospital was working independently on the same problem, and that he began at 2 per cent sodium chloride and, working with increasing concentrations, found that 2.5 per cent sodium chloride was the desired strength to be used. He was also working with a standard

control of egg albumin, using a modified Purdy technique for the test.

With these facts we now felt that our difficulties were about over, but believed that a standard made from human blood serum would perhaps be more nearly ideal, since urinary albumin so closely resembles the coagulable proteins in the blood serum. Then, too, Folin, in his laboratory manual, gives the details of a test, using a standard made with hemoglobin free sheep's blood serum, so you see the idea is not new. Sheep's blood serum is not as readily obtained in our laboratory as is human serum, so it seemed quite logical to use the latter as a standard.

It was found that 5 mls. of pooled human serums diluted to 100 mls. with 2.5 per cent sodium chloride solution yielded by gravimetric determination an average albumin content of 6 grams per liter. With this standard solution we then proceeded to shorten the time element from twenty-four hours to fifteen minutes by adopting a modified Purdy test instead of the Esbach.

The procedure as now used is as follows: Place in a 15 mls. capacity graduated centrifuge tube 10 mls. of urine to be tested, and in another similar tube 10 mls. of standard serum solution; then add to each tube 5 mls. of Tsuchya's reagent (phosphotungstic acid 15 gms., hydrochloric acid 50 mls., and make up to 1000 mls. with alcohol 95 per cent); mix thoroughly by inverting back and forth, and let stand for ten minutes; then place the tubes in the centrifuge and centrifugalize for three to five minutes. Record the amount of precipitate in each tube and calculate the result.\*

The standard tube reading equals 6 gms. albumin per liter.

We have made over one thousand determinations, using the above technique as routine, with frequent checks by the gravimetric method. The average difference was 3 per cent higher by the centrifuge method. In many determinations identical results were obtained, figuring to one decimal. No attempt has been made to estimate closer with one decigram. Slight errors may readily occur in reading amounts between the graduations on the centrifuge tube, and also in the gravimetric method, if the sediment is not properly dried to a constant weight.

When using the above method it must be remembered that the standard is set up at the same time as the unknown, and that all solutions are kept under the same temperature conditions at all times until the final reading is made. In this way only is one justified in comparing results. If it is necessary to dilute the unknown, do so with 2.5 per cent sodium chloride solution, a stock bottle of which is kept under the same temperature conditions as the standard and unknown. In this laboratory it has been practical to keep our standard solutions at room temperature.

The standard solution is made fresh each week, oftener only when the stock has been used. A small amount of preservative (chloroform 1 to 1.5 mls. per 100 mls. of serum solution) can be added to prevent bacterial growth or other determination. In

\* The supernatant fluid should be water clear after centrifuging. If there is the slightest turbidity then the concentration of albumin is too great for complete precipitation, and the original specimen must be diluted. This necessitates repeating the entire procedure.

our laboratory this has not been necessary because our standard is used rapidly and we make only 100 mls. at a time.

Since our technique was adopted as a routine procedure there has appeared an article entitled, "A Simple and Rapid Quantitative Test for Albumin in Urine," by William G. Exton (Journal of Laboratory and Clinical Medicine, vol. X, No. 9, June, 1925, pp. 722-35). This method, according to the report, has "a possible accuracy to within an experimental error of 2 mg., or one part albumin in 50,000 parts of water." The test is based on the principle used in Folin's method of comparing varying degrees of turbidity with known standard solutions of coagulated blood serum proteins accurately prepared in a series of tubes, ranging from 0 to 100 mg. albumin per 100 mls. Exton's clinical albuminometer for comparing the unknown with the standard for rapid reading is described, together with details for preparing the standard. We did not feel that this test was practical for our purposes so cannot report any experiences with it.

In conclusion, we feel that the test here reported and which we have now used for the past year, is one that is technically simple, practical, time-saving, and accurate to a degree well within the range of the requirements for routine clinical laboratory procedures.

**Safeguards in Cataract Expression**—This paper by John Green, St. Louis (Journ. A. M. A.), deals solely with certain points in operative technic. The general pre-operative preparation of the patient will not be discussed. It is summarized as follows: 1. Iridectomy under a conjunctival flap heals promptly, without reaction and with little or no danger of infection. 2. In case of immature cataract, opportunity is offered for artificial maturation. 3. Misbehavior by the patient will not imperil the success of the iridectomy and will warn the operator to use extra precautions (akinesia, lid hooks, etc.) at the time of the expression. 4. A realization of the painlessness of the first operation and postoperative period greatly heartens the patient and abolishes his dread of the second operation. 5. The trapezoidal flap possesses all the advantages of the small triangular flap and, in addition, (a) it is thicker and more sturdy; (b) it covers the entire section, and (c) it is held in perfect position under all circumstances by the central Verhoeff stitch and the lateral conjunctival sutures. 6. The steadying of the flap by downward traction on the threads of the Verhoeff stitch enables the operator to complete the section without fear of cutting off the flap. 7. With the Verhoeff suture loosely tied, the flap is drawn into good position and irrigation of the chamber may be carried out with great security. Should vitreous present or prolapse, the immediate tightening of the suture will cause the vitreous to recede or prevent further loss. 8. The toilet of the wound can be carried out leisurely and effectively even after vitreous loss. 9. There is little tendency for the iris to prolapse (no "visible" prolapses in seventy-six cases). 10. Iritis, if it occurs at all, is mild and easily controllable by atropine, heat, and salicylates. 11. Anterior synechiae are very rare. 12. There are a large number of "keyhole" pupils. 13. The secondary membrane is usually very thin and can be sufficiently slit by a single vertical incision (Wheeler). 14. Thick membranes are dealt with by Ziegler's inverted V-shaped dissection.

It is no longer sufficient to name the disease from which the patient suffers and prescribe an appropriate remedy. The physician of today must attempt to analyze the disturbances accurately. He must be prepared to measure the alterations manifesting themselves from day to day, and his treatment must be established on a quantitative basis.—Rufus Cole, Science, August 6, 1926.

## Special Article

### EDUCATION OF THE PUBLIC IN ELEMENTARY MEDICAL SCIENCE

By GEORGE E. COLEMAN \*

President American Association for Medical Progress,  
Santa Barbara County Branch

**THE EDITOR**—The American Association for Medical Progress is a favorably known democratic organization, made up largely of intelligent nonmedical citizens, and conducted with the praiseworthy purpose of making suitable facts about the promoting of health, the prevention and treatment of disease, and in general the methods, purposes and practices of educated physicians, better and more widely understood; to assist in combatting the effect of ignorance and the activity of quacks, cultists and sciosophists of all classes in their efforts to capitalize sickness to their own advantage.

The Santa Barbara County branch of the Association, of which Mr. Coleman is president, is a particularly and effectively active one, due doubtless largely to capable activities of its president with the co-operation and support of honorary president, Henry S. Pritchett; honorary vice-presidents, Judge R. B. Canfield, George S. Edwards, Seth A. Keeney, George Owen Knapp, and C. A. Storke; a lay advisory board of F. F. Peabody (chairman), Frederick C. Clements, George W. Clyde, Col. Charles H. Graves, R. W. Hersey, Bernard Hoffman, Mrs. Michel Levy, Mrs. Frances B. Linn, Miss Annie McCaughey, Paul E. Stewart; and a medical advisory board made up of ten physicians of the county.

Mr. Coleman's article, illustrated by reproductions—some of them advertisements in the newspapers of Santa Barbara—is published that physicians may more fully realize and appreciate the strong ally they have in promoting and protecting the health of our citizens.

Even our good friend Mr. Coleman, whom physicians honor and respect, misses the point in medical ethics that encourages individual physicians who are in the practice of medicine to issue their newspaper and similar health information in the name of their County Medical Society, so as to avoid a misunderstanding of motives both by the public and other physicians, which experience shows to be otherwise the unavoidable and invariable result. The apathy of physicians also is hardly as bad as indicated because the majority of periodicals and hundreds of newspapers are publishing medical information, while the A. M. A. publishes a popular monthly magazine devoted exclusively to authoritative health information, and a group of ethical doctors of California also publish monthly a popular health magazine.

However, none of these facts detracts from the value of Mr. Coleman's message, nor do they make the added work of the American Association for Medical Progress less necessary.

**T**HIS article is prompted by a desire to further inform physicians of the effort the organization I represent is making to give reliable medical information to the public. I shall also endeavor to make clear the imperative necessity for a more active participation by the profession as a whole in the work along these lines that is being done by laymen.

The Santa Barbara County Branch of the American Association for Medical Progress has been in active operation considerably less than a year. It has received favorable comment in CALIFORNIA AND WESTERN MEDICINE and

\*George E. Coleman (119 Hot Springs Road, Santa Barbara, California), B.S. University of California, 1891. Graduate study: At Pasteur Institute, Paris; Metchnikoff's laboratory; Hospital Santa Maria Nuova, Florence, Italy; private laboratory at home in Santa Barbara. Scientific organizations: Society of American Bacteriologists, Santa Barbara Natural History Society, National Geographic, president and organizer of local branch American Association for Medical Progress. Present appointments: Research Associate, Hooper Foundation for Medical Research, University of California Medical School, San Francisco. Publications: Articles in Ann. de l'Inst. Pasteur, Jour. of Infectious Diseases, Better Health and newspapers; about fifty columns of latter last year; instructive articles for laymen in elementary medical science.

the Journal of the American Medical Association. While giving full credit to the very effective work of other organizations, I feel that physicians should know of the sustained effort along these lines we are making in Santa Barbara County. Our residence in southern California, the happy hunting ground of quackery and cultism, makes the menace of epidemics seem very real to us.

Concisely stated the aims of our Association are:

1. To encourage and aid all research and humane experimentation for the advancement of medical science.
2. To inform the public of the truth concerning the value of scientific medicine to humanity and to animals.
3. To resist the efforts of the ignorant or fanatical persons or societies constantly urging legislation dangerous to the health and well-being of the American people.

Our organization with a present membership of 256 has the hearty endorsement of the County Medical and Dental societies as well as the City and County Health authorities. Our honorary officers and our lay and medical advisory boards are made up of leaders in medical and civic activities in this community. We have maintained close contact with various agencies devoted to public education in health matters, including our parent national organization, of which the writer is a director. During the past nine months we have published about fifty-five columns of medical information in local newspapers. About half of this appeared as answers to questions in our Medical Progress Column. The other half was written by me principally on the cause and prevention of disease. I have also sent out reprints of addresses which I have delivered before the Rotary, Exchange, University Clubs, etc., as well as at other meetings. As a laymen's organization we have not felt strictly bound by the ethics of physicians, so in addition to reading matter we made formerly several announcements in the advertising sections of the newspapers. This was later discontinued as its value was questionable from an educational as well as from a financial standpoint. Some of these announcements are reproduced in this article.

### The AMERICAN ASSOCIATION for MEDICAL PROGRESS

*favors*

### Humane Animal Experimentation

By this method only can a cure for Tuberculosis, Cancer or Animal Diseases be found.

THE ANTI-VIVISECTIONISTS WOULD PERPETUATE FOREVER THESE DISEASES OF MAN AND DUMB ANIMALS.

Your membership will help promote public health and enlightenment.

I have made a special appeal to those uninformed and prejudiced members of humane societies, who happen to be genuine lovers of animals, that they may be brought to realize the necessity for animal experimentation in medical research. The results of the investigation by eminent bacteriologists, as reported by the American Distemper Committee, of this disease in dogs has been given the widest publicity by us. This because of the importance of

### The American Association for Medical Progress

THIS is an organization of laymen whose object is to disseminate as widely as possible authentic information regarding the fundamentals of modern medicine. Information as to the cause, prevention and cure of disease in man and animals depends upon a careful check on research. And experimental research depends largely upon the humane use of animals. This very factor of humane animal experimentation has accomplished the following great blessings for mankind and dumb animals:

It has found the way to prevent anthrax, Texas fever and hydrocephalus.  
It has replaced vaccination humanus and simius entirely preventable.  
It has given us anesthetics and eliminated surgical infections.  
It has given diabetics, through insulin, a new lease of life.  
It makes the preventists and cure

It has cut the death-rate of diphtheria over 80%.  
It gave us most of our efficient methods of sanitation.  
It has lead the way to the abolition of yellow fever and malaria.  
It has made typhoid no longer a community danger.  
It has made possible correct diagnosis and permanent cure of syphilis.  
It has made possible the prevention of scarlet fever almost a certainty.

Only by means of humane animal experimentation can one hope for the cures of cancer, tuberculosis, infantile paralysis or animal diseases as found. Quackery is a menace—Scientific medicine has no "secret remedies." Continuous education can greatly reduce the failure of others to understand rightly the scientific attitude. We need the help of every intelligent citizen in the community...

Your membership will help promote public health and enlightenment.

the results attained insofar as they may have a hearing on future research in human and animal diseases and for its value in proving the necessity for the humane use of animals in the search for new knowledge. According to an article which recently appeared in the "Christian Science Monitor," it was announced at a meeting of the Anti-Vivisection Society of Los Angeles that "the society is planning to send an anti-vivisection car on a tour of the state as part of a campaign against vivisection and inoculation, following a plan which Doctor Hadwen described as having been successful in England." It is impossible to tell to what extent our efforts as a whole, thus far, have been justified, but the vote of this community on the proposed anti-medical legislation to come up in November will tell the tale.

Without outstripping the bounds of modesty I feel that I may consider myself as a sort of liaison officer between laymen and the medical profession in this community. As a research worker in bacteriology and allied subjects and a constant reader of many medical journals, including the journal of the A. M. A., for the past sixteen years, I also feel that, without offense, I may ask you for a hearing concerning the attitude of some physicians toward the active participation by members of the profession in the education of the public in elementary medical methods. The necessity for this has been stressed repeatedly by prominent physicians and has the endorsement of the A. M. A., the C. M. A., and other official medical organizations. I earnestly call the attention of every physician in this state to the very illuminating article by Wendell C. Phillips, president of the A. M. A. (Jour. A. M. A. 86:17, p. 1259).

For years before the local branch of the American Association for Medical Progress was organized I have been fighting battles for scientific medicine and in a section of the state where it has many enemies. If they are not to increase, the profession as a whole will have to arouse itself from its apathy. Anti-science or sciosophy, as Doctor Jordan calls it, is rampant throughout the country and the discrediting of the medical profession particularly is a common indoor sport where groups of really intelligent people, not necessarily cultists, often discuss your failures. The "Medical Trust," state medicine, corporation prac-

## The American Association for Medical Progress

### This Is An Organization of Laymen

Whose object is to disseminate as widely as possible authentic information regarding the fundamentals of modern medicine. Information as to the cause, prevention and cure of disease in man and animals depends on a careful check on research. And experimental research depends largely on the humane use of animals.

Full use of our best scientific knowledge is possible only with the support and co-operation of the public. Such co-operation depends entirely upon an appreciation of what scientific medicine and research mean.

Ignorance is a menace to medical progress and to the health of the people. By its inability to under-

stand the scientific attitude, it opposes medical knowledge that can be gained only by the experimental method. This can be remedied by continuous education.

A membership in this Association will cost only Two Dollars annually. We need the help of every intelligent citizen in the community.

Read the "Medical Progress" Column in the "News"  
Every Saturday Night

Your membership will help promote public health  
and enlightenment

tice and, of course, unfortunate individual experiences are the usual themes. Seemingly plausible "body mechanics," "expert dietitians," and religious healers, are rapidly gaining the confidence of educated but unthinking people. You have only yourselves to thank for this. You have lost the outer ramparts in the battle for a single Board of Medical Examiners in California as well as in other states and now they are about to batter at the very doors of your hospitals.

Better support will have to be given to those fearless ones among you, and there are several in Santa Barbara who are working for the good of all by health talks and by articles in the lay press. There is no more reason why information concerning the physiological processes of the human and animal body should not be authoritatively given to laymen than astronomical or other scientific knowledge. The New York "Evening Post," in a convincing article, has truthfully stated that "the science of medicine as far as laymen are concerned is the most tongue-tied of all the learned professions."

If you could only realize as I do the avidity of the public for reliable medical information you would discard your ultra-conservatism and aloofness, remodel your ethics to meet the exigencies of a menacing situation, and give the public what it wants and above all what it needs. If you do not do this, plausible quackery will increase and the high ideals of public service which have been gained by the profession after long years of striving, will suffer. Already in your ranks standards are being lowered and reputable physicians are found who are willing to use such "secret remedies" as Koch's Cancer Cure, of which I know only one thing—that its formula has not been given to the profession, and that is enough. By taking the public into your confidence, by establishing a closer contact with your patients, by explaining to them the knowledge and ideals upon which your professional standards have been founded, you will enhance your usefulness and extend your activities for human welfare in general and your own in particular.

I have no quarrel with the medical profession. Though lacking a medical degree, as a medical scientist I feel in my heart and in my sympathies as one of you. I therefore urge you to give careful consideration to the present hostile and dangerous attitude of large numbers of our population and to co-operate more widely with the efforts of those physicians and laymen with medical knowledge

who are fighting the battle of scientific medicine. It is your fight, and if it is to be won, the control of the tactical methods for winning it should be kept largely in your own hands and not relegated almost entirely to well-meaning but often uninformed laymen.

**Developing the Nursing Instinct in Girls**—The nursing instinct is as universal among normal girls as is the policeman or soldier instinct among boys, but its intelligent development is of far more recent origin.

From time immemorial our boys have had encouragement and help in promoting and fixing this military instinct, but it remained for the Red Cross to initiate and develop a nation-wide promotion of the far more useful spirit of nursing among girls. This they have done and are doing through a variety of highly commendable methods which are being improved and made more practical and useful.

Nowhere is this instruction being more wisely and systematically promoted than on the Pacific Coast under the leadership of Dorothy Ledyard, R. N. (Assistant National Director Nursing Service, A. R. C.).

A few quotations from teachers in home nursing courses and from pupils form interesting reading which older heads may well ponder:

1. "The students of the Home Nursing Class have a great deal more interest in having good health and are glad to co-operate with us when we suggest they see a doctor about eyes, ears and any other ailments of a minor nature. Before, unless they were sick in bed, we could not get them to see that small ailments should have the attention of a doctor."

2. "Nineteen students have signed up for the Red Cross Course in Home Hygiene and Care of the Sick. So far we have had the Chapter on Bed-Making, Cause and Prevention of Disease, and the Care of Patients with Communicable Disease. It is a very interesting and interested group. The county nurse is planning to convert the room of one of the girls into a sick chamber, with Mary isolated as a scarlet fever patient. The students are looking forward to helping with this clinic in connection with their class work, which takes three hours a week, meeting three times a week. The pupils are required to spend two hours a week doing infirmary duty. Several of the girls are interested in nursing."

3. Two young high school misses express themselves as follows concerning the Red Cross Home Hygiene Course: "I am not yet certain, but I think I shall be a nurse. If I do, hygiene will help me a great deal, for I shall have had the foundation for the work in the hospital. It would be a great help to already know how to make a bed correctly, to give a bath in bed, and the great many other things which we learn to do."

"I intend to go to college, then some time have a home of my own. Home nursing will help me while I'm in college away from mother, to look out for myself. In my home I'll know best how to care for the home and persons in it."

4. "The nurse, this month, directed her efforts mainly to making home calls on parents whose children needed physical defects corrected immediately, hoping to persuade them to have the necessary work done during the Easter vacation. Her efforts were rewarded by eight children having tonsils and adenoids removed, ten having dental work done and two being fitted with glasses."

5. "This week we begin our work bathing babies in the home. Four mothers have given permission for the girls to come to the home and give baby a bath under my personal supervision. Much excitement among the girls."

6. "Four classes of mothers were held during the month. One of the discontinuing members reported having had her small son operated on for diseased tonsils and adenoids. Class discussion of children's defects had made her realize the possible seriousness of the child's condition."

Excellent work. The only unsound note is contained in reports which show zeal carried too far, and about which we refrain from comment.

The rattlesnake seldom strikes without warning; smallpox always.—Naullaqui.

## - BEDSIDE MEDICINE FOR BEDSIDE DOCTORS -

*An open forum for brief discussions of the workday problems of the bedside doctor. Suggestions for subjects and discussants invited. Useful extracts from letters will be published.*

### **"WHAT CAN DOCTORS DO TO INCREASE THE NUMBER OF USEFUL BEDSIDE NURSES, AT A PRICE CONSISTENT WITH THE ESSENTIALS IN TRAINING AND EDUCATION FOR BED-SIDE NURSES?"**

**The Editor**—It has been estimated that some two million people consult doctors daily and that another three million should do so. Less than half a million of these have the services of graduate nurses and, if patients in hospitals are excluded, a relatively small number have the services of educated nurses.

Expressed in another way, over 90 per cent of nursing—such as it is—is being rendered by voluntary, untrained or inadequately trained people. With the cost of efficient medical and nursing services increasing, as they inevitably must as the cost of the education and training of these servants of health increases, the burden of the costs of sickness increases, and more and more people are forced to do without them or accept poor substitutes.

Not a pretty picture, but a true one, and one that makes those who have an interest in health and welfare—and who has not?—do a lot of serious thinking—and planning.

The wide variety of opinions about, and suggested remedies for, the problem offered below but emphasizes the fact that *the remedy, if there be one, has not been discovered*. Nevertheless, there are a number of valuable suggestions, and many important phases of the subject are much clarified by one or another of the discussants.

Further suggestions for subjects and names of prospective discussants are invited for *Bedside Medicine for Bed-side Doctors*.

**Fred R. Fairchild\***—The problem of nurse scarcity is very real and very serious. For this condition we physicians are directly responsible, though, I think, not blamable. We have insisted on nurses measuring up to rather high preliminary educational standards and on their having a professional preparation covering three years. We have demanded that their qualifications be such as to relieve us of many of the responsibilities and duties which we formerly gladly assumed.

This attitude on our part came from motives highly commendable. The best, we thought, was not too good when life or health was at stake. This same high standard was carried to all classes of cases where nurses were needed. The result has been inevitable. The law of supply and demand has operated to fix nursing fees beyond the ability of the average patient to meet the bill. This does not mean that the highly trained nurses are less desirable. It simply means that they are unobtainable.

Many discriminating and estimable people ride in Fords and find them indispensable. Cadillacs they know are better, but for them they are unobtainable. Because they cannot have the ideal should they be deprived of that which is necessary and valuable even though not ideal? Apply this to the nursing situation. We must still have highly trained and

competent registered nurses. Let us not demand less as to their preliminary education, technical preparation or fitting personality. But we cannot have this class of service at a price consistent with the ability of many deserving patients to pay.

For these sufferers there must be those nurses who, like Fords, are not ideal, but are still of exceeding value and who can be obtained at a fee consistent with the patient's ability to pay.

We doctors can then "increase the number of useful bedside nurses, at a price consistent with the essentials in training and education for bedside nurses" by accepting the services of less highly trained women for those cases not demanding the services of an R. N. These women should have their special training in our Training Schools. Their training would be materially less in time and in exacting details. This training would not qualify them for the degree of R. N. It would create an avenue for the production of a large number of Nurse's Aids, thus covering the demand for help. They would serve at fees materially less than those received by the R. N.'s, thus giving aid to those who must now go without help.

**William H. Gestweit \***—This subject of nurses and their education, fees, etc., is a perennial problem. The division of the nursing force into practical nurses, near R. N.'s and R. N.'s is impractical and unnecessary. If a case does not need the skill of a highly trained nurse, it needs only an attendant, a companion. The same rule should hold with nurses as it does with doctors. If the patient needs medical attention he should have it, and not a makeshift substitute, varying in character with his financial ability. This solution might be suggested: The training course might be divided into two phases, the fundamental requisites for nursing in general followed by further instruction and practice for those who desire to enter the field of surgical nursing. The young women who do not so desire should be allowed to complete their course without spending their time in the "surgery." These medically inclined young women could go on at this time into those subjects fitting for that type of service. Is not the major part of nonsurgical nursing given over to the care of acute infections and chronic metabolic

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\*Fred R. Fairchild (Woodland Clinic, Woodland, California), M. D. Cooper Medical College. Practice limited to Surgery. Hospital connections: Chief Surgeon Woodland Clinic. Appointments: Chief of Surgical Staff, Leterman General Hospital, 1918. F. A. C. S.

disturbances? Is not a large part of such care dietetic and physiotherapeutic in character? Special types of preparation of the articles of food, special articles to be prepared, massage, baths, ventilation and exercise are not necessarily the limited field of a specialist that must be brought in addition to the doctor and the nurse. Yet the so-called "practical" nurse or the housemaid cannot function properly along these lines. If you think there isn't a difference in the preparation of food alone, just try it out in the simple matter of making toast. If all of this, the surgical and the medical training, is required there will be little hope of shortening the course of study, and to my notion the shortening is the crux of the matter. The time needed to produce any article figures largely in the cost. Witness the automobile. The longer the training, the more the nurse must charge for her services—only a just economic principle.

We can still further shorten the time required for training without lowering in the least the standards. Hospitals may have changed in the past few years, but in my day too much housemaid routine was demanded of the students. They become tired out doing that which they should and did learn at home. Time that might be made available for classroom or needed relaxation is used up in washing bedsteads, sweeping and dragging furniture around. If there is no need for additional dietetic instruction, as is probably the case, shorten the course by so much and let the hospitals supply the help to keep the institution in cleanliness and order.

To summarize: The division of the advanced instruction into two branches and the elimination of scrubwomen's labor will shorten the course without affecting the quality of the graduates. The turnover will be increased. The graduates will have spent less of the productive years of their lives in training and can afford to charge less. Then, too, those who stayed out of training because of this unnecessary and avoidable use of time and energy will enroll. If high charges is the bone of contention, increase the turnover and the output. That lowers prices.

**R. G. Brodrick \***—Nursing in the home has become a serious economical problem for the middle class—the wage and salary earners. The rich are able to pay for whatever care is necessary or desired; the poor are cared for efficiently in our city and county and state institutions.

There remains, then, the person who is too well-to-do to be cared for in a public or charitable institution and cannot afford to go to a private institution, but, who, nevertheless, needs nursing care.

Increased pay and shorter hours have resulted in

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an increased cost of home nursing, for, whereas formerly a nurse could be had for \$35 per week on twenty-four-hour duty, it now costs \$12 per day for a similar service.

What can doctors do to help solve this problem? In this age the specialists, who constitute a large percentage of the medical profession, and even men in general practice are apt to lose sight of the patient's financial problems or fail to ascertain if there be any and to recommend the employment of a graduate nurse or a practical nurse, the latter usually a woman who "likes to take care of sick people" and who very often has had no proper training.

Doctors can help in a very definite way toward the solution of the problem by fostering and backing the plan of hourly service in the home by visiting nurses.

In Oakland there is a Visiting Nurses' Association which is rapidly growing. These women, who are all graduate Registered Nurses, visit in the home and their service is paid for on an hourly basis.

**Sol Hyman** (San Francisco)—It is difficult to suggest a constructive method of increasing the number of bedside nurses through any action that may be initiated upon the part of the physician other than to reduce the period of training for them. This will undoubtedly attract a fairly large number of young women who now shrink from the long and arduous curriculum prescribed. But a year less of training period will not, and cannot, materially reduce the cost of the bedside nurse to the patient. The nurse now receives no more than a fair living. It will simply mean more nurses available to those who can pay. A surplus is not to be feared because there are too many other avenues now open to women, and the existence of a large number of unemployed nurses will shunt the future prospect into some other field.

The greater use of the available number of nurses is now beginning to be met by the visiting nurse. In some cities there have been organized visiting nurse associations, the deficit being met by a community chest or other public charity. This, of course, does not reduce costs, but merely distributes them—a form of insurance. In certain, particularly the more or less chronic, cases the full fee of a visiting nurse can be paid much to the advantage of the patient and this practice will no doubt grow as the service becomes better known.

The matter of the supply of bedside nurses is, of course, a purely economic one. The day of women becoming nurses for sentimental reasons is gone. The nurse has become an essential part of the social fabric. To increase the supply we must provide a means for insuring a good living with adequate provision for the future—if it can be done.

**Edna L. Barney \***—Useful bedside nursing service without the title of R. N. would seem to be analogous to useful bedside medical service without

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the title of M. D. The services of physician and nurse imply two professions which have advanced so much by mutual help that the status of one cannot be modified without similarly affecting the status of the other.

To procure nursing service at a less cost, it has been suggested that a nurse without surgical training would suffice for nonsurgical cases, such as "acute infections and metabolic disturbances." Would not this type of nurse, especially in rural districts, be confronted with the problems of isolation, and the special care and precautions incident to scarlet fever, diphtheria, typhoid and poliomyelitis; also the technique for giving insulin and other hypodermic medication? Does not the suggestion to sidestep surgical training overlook the fundamental fact that the crowning essential for a professional nurse is her consciousness of asepsis, which nowhere can be so thoroughly acquired as in her course of surgical training? Without this particular training for the professional nurse, the term "modern medicine" can have no meaning.

It is true that in hospitals a large amount of useful service is rendered by student nurses under the immediate guidance of R. N. supervisors, but outside of hospitals a useful service of lesser qualified nurses could not prevail. Any arrangement for outside nurses approaching a double standard of nursing education would soon result in endless confusion. The best that can be done for the outside cases of moderate means who require professional nursing is to act in accord with "quality, not quantity." This may be accomplished by accepting the part-time service of visiting nurses, an expedient which is being used in many cities with apparently good results.

As to shortening the time of hospital training—this can be done by introducing a one-year preparatory course for nurses into the curriculum of Junior Colleges throughout the state. This would relieve the student nurse of the hardships resulting from the combination of attending classes and "being on duty," which combination now requires eleven hours, or so, daily. The applicants would come much better prepared and have a far better opportunity for concentration upon the actual training within the hospital; and there would be, no doubt, a corresponding advantage to those hospital patients more or less under the care of the student nurses. As to remuneration for the nurse, we must bear in mind that considering her responsibility, skill, and hours of service, she now receives less monetary recompense than is paid for any other service of equal importance.

After all is said and done, the present-day hospital expense is the heavy burden to the sick of moderate means. The nurse is only a part of that expense. Moreover there is a great deal that can be said about home care in sickness, and about "what doctors can do" for useful bedside attendance. There are many patients of moderate means in hospitals who, with a visiting nurse and a willing doctor, could have ample care in the home at much less expense than in the hospital with private room and private nurse; and in still milder cases the doctor might, to a greater extent, emulate the much and deservedly lauded old-time family physician; be will-

ing to mingle more time and congeniality with the handicaps in homes of moderate pretensions; learn to improvise against many little and some big inconveniences, and give kindly repeated instructions to members of the family, not only for relieving the present stress of bedside difficulty, but for guarding against like difficulties in the future; and withal, hearken to that old-time spirit which, in the hour of sickness, whispered the meaning of home and the faithful family doctor.

**N. N. Wood \***—There is no question in my mind but that at the present time, and possibly more in the future, it will be necessary to do a large amount of actual bedside nursing with other than graduate nurses, whether these others be called maids, practical nurses, nurse maids, attendants, or by some new name, since much of this bedside work is, in my judgment, not really of a quality to justify its being regarded as the proper work of a *profession* unless we are to assume that the professional aspect of such work pertains to the heart, that is, a service of love, and is to be found in the consecration to such a needed service, as obtains in the ministry of personal work rather than in the technical learning and highly developed intelligence required for a service, such as distinguishes the three learned professions of theology, law and medicine.

I believe that the profession of nursing is the greatest open to women, but that the claim that much of the bedside nursing required constitutes a profession is made in error, unless that claim is based on the argument that the service given is rendered as a matter of love and not as a demonstration of learning.

**Anna C. Jamme, R. N.** (Director, Bureau of Registration of Nurses, California State Board of Health)—The question rests on the fundamental basis of (a) supply and demand of nurses; (b) economic situation; (c) conditions of work.

Apparently the supply of graduate registered nurses is on an average sufficient, or we would not hear of so much unemployment. The difficulty is not supply, but distribution; nurses congregate in large cities and are unwilling to go to rural communities. Occasionally the supply may fall short, as in times

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of widespread illness and at certain seasons of the year.

The economic situation may have an influence upon nurses drifting away from private nursing. The cost of shelter, food, clothing, is high in comparison with the private nurse's income. She cannot rely upon constant employment; her fee is more or less fixed (\$6 to \$10 a day); many times she has trouble in collecting her bill, and even though she may be constantly employed she can have only a fair income, which may average not more than \$125 a month.

Conditions of work on the whole are difficult for the private nurse, whether in the hospital or in the home. She is on duty many consecutive hours; she has little time for culture or restful recreation; considerable physical wear and tear; no paid vacation; and remuneration does not increase according to efficiency. Consequently, nurses are seeking branches of work other than private nursing, even at comparatively low salaries, for the reason that they may have constant employment, home life, vacation time, more regular hours of duty, activity while on duty, professional growth, and less physical wear and tear.

Looking toward the solution, namely, to bring skilled nursing to all classes of people at a price which they can afford is a matter of sympathetic co-operative action between the public, doctors and nurses. Efforts have been made over a period of many years to meet the situation satisfactorily by the following means:

Group nursing in hospitals on an eight-hour basis. One nurse may take care of two, three, or even four patients, and the expense shared by the patients. There is often a great wastage of the nurse's time in caring for one patient after the acute stage is passed.

Hourly nursing in the home, whereby a patient may have the services of a skilled nurse for the number of hours necessary for care and treatment at a price which will not be as excessive as for the services of a full-time nurse, the nurse to be on salary under the direction of an organization.

Visiting nursing brings skilled care for shorter periods to patients in the home. This is not necessarily a gratuitous service, but can be paid for in accordance with the patient's ability to pay.

The practical nurse may be well utilized in chronic nursing, or in cases requiring less knowledge and skill. She is, however, not much less expensive than the registered nurse and there is no control of her fees or work, unless she is attached to a registry that will do this.

To improve the distribution of the existing supply of skilled nursing and to make it available to a larger number of people is a study that may be participated in by doctors, nurses, and interested lay people. However, the central idea around which all plans should be grouped is that the quality of work should be upheld and not lowered; that the problem itself should be attacked and not the nurse. We should aim to bring more efficient nursing to more people rather than an increase in the number of inefficient nurses to serve more people.

**Dorothy Ledyard, R. N.\***—We have been accustomed to accepting the truth of old adages handed down from time immemorial without question. One of these, "A little knowledge is a dangerous thing," causes one to wonder just what constitutes "a little knowledge." Who among the wisest of us can claim in our brief years more than that? On the contrary, there might be instances when total ignorance would have fatal results.

The oldest and even yet the most popular profession open to women is that of wife and mother, yet little if any systematic training is given women for homemaking. The great majority of girls marry with but little conception of their future duties, and practically no training to help them meet the heavy responsibilities of wife and mother.

Perhaps the logical solution to the problem of increasing "the number of useful bedside nurses" lies in teaching to every girl who graduates from high school the fundamental relationships between individual health and cleanliness and sanitation; efficient and healthful methods of meeting the normal problems of the care of the baby, the growing child and the aged in the home; teaching and developing some manual skill in the care of the sick under home conditions and according to physician's directions.

Is there any reason why any intelligent girl or woman cannot learn how to handle, dress and feed babies and small children intelligently and skillfully; why they cannot learn how to make a patient comfortable; give a bed bath; change the linen of an occupied bed; take temperature, pulse and respiration rate accurately; and to follow intelligently the instructions of the physician?

Only prolonged and careful training, such as good hospital training schools afford, can furnish the skill and judgment required in nursing persons who are seriously ill. Upon the trained nurse the modern practice of medicine makes great and ever-increasing demands. Good will and sympathy are no longer enough. Amateur nursing, even when performed with the best intentions, may involve grave dangers for persons who are seriously sick.

Such a course for girls and women can be in no sense regarded as a substitute for a nurse's training, and procedures requiring technical skill should not be included. But such a preparation must make possible earlier recognition of symptoms of disease and the necessity for early medical consultation and correction of physical defects, and insure more intelligent care of communicable disease.

Since approximately 90 per cent of all sick persons in the U. S. are cared for at home, even in cities where hospital facilities are good, it is reasonable to assume that at least 50 per cent of this 90 per cent must be cared for by members of the family. If we intelligently train our women to be prepared to give

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simple nursing care and to call for medical advice before the disease becomes too serious, we are solving, to some extent at least, the problem of the shortage of nurses.

**Howard H. Johnson \***—In the absence of war or pestilence our problem seems to be wholly social and economic. In emergency almost any woman will do her part as a nurse without thought of remuneration.

Assuming conditions which exist today, we have some twenty pursuits other than bedside nursing in which a registered nurse may engage, most of them with more pay, shorter and more agreeable hours in the long run than are available in bedside nursing. That registered nurses do remain at bedside nursing seems remarkable in many instances and the result of various reasons in others.

The original supply of students depends in quality and quantity upon the resultant of several forces, principally the ones which have to do with the "urge" to be of service to humanity, and, secondly, social, financial and other gain, for the young woman selecting her lifework.

The average pay of a registered nurse is 50 cents an hour or \$6 for twelve hours' work, meals furnished. The seamstress receives 65 cents to \$1 an hour for eight hours' work; domestic servants on part-time receive 50 cents to 75 cents an hour; stenographers and secretaries receive 40 cents to 65 cents an hour for an eight-hour day, forty-four hours a week and two to four weeks' vacation with pay. The nurse, after a long hard case, takes a rest at her own expense. Her vacations and time when patients do not employ her are not only nonproductive, but cost money in room and board so that her average monthly income may be approximately \$125, with collections difficult. Stenographers and secretaries again have an opportunity for advancement, whereas the bedside nurse is paid \$6 a day when she graduates and the same ten years later.

This much from the standpoint of the nurse. From the standpoint of the doctor and patient let us assume a composite case: a severe abdominal operation with pneumonia as a complication. Two of the best nurses available are engaged, cost to the patient \$12 per day; doctor knows that "drips, drugs, temperatures, pulse and general condition" will be accurately observed and that he will be called if needed, so that he is not compelled then to sit with the patient or call frequently in order that he may keep watch of progress, but is free to go about his practice as usual. In ten days the day nurse is relieved by a member of the family who has been taught to take and record temperatures and pulse. In two weeks the night nurse is gone; cost \$144 for nursing, which nursing made the doctor, family and patient comfortable throughout the trying two

weeks. The doctor then suggests he send either a visiting nurse to "do up the patient" or his own full-time nurse whom he employs and pays regularly at the rate of \$150 a month, saying he will add the cost of this nursing to his bill. Depending upon the family circumstances, nursing has cost at the end of the illness \$165—one payment on the Cadillac or five payments on the Ford. Question: Which was the most important, the patient or the car?

Between this extreme where nothing but the best can be employed and the opposite extreme where the patient only needs watching, water, feeding, medicine and an attendant who has the ability to use a telephone, the doctor could employ visiting nurses' "hourly nursing," his own "full-time nurse," relatives or, most expensive of all, the "practical nurse" at \$4 a day, \$25 a week, and little real help or "personality," which seems to mean so much nowadays.

Doctors or nurses have done a few things to make more bedside nurses available in that they have done away with so-called "maid's work" in training; the training period has also been reduced to twenty-eight months and might be reduced four to six months more if some of the "book work" (hygiene, physiology, anatomy, dietetics) and "classroom" demonstrating (bed making, temperatures, pulse, bathing irrigations, etc.) could be given in the grammar and high schools, much to the relief of schools of nursing and to the everlasting benefit of humanity and all women who expect to have sickness or children in the family.

Many patients demand nursing service long after the need for it has past. Some relatives find it inconvenient to substitute for the registered nurse and some require a mental jog for necessary rearrangement of the budget in case sickness interferes with the payments on the radio, the Ford or the fur coat, but withal it is encouraging to note the repeated evidences of readiness and anxiety to do anything and everything that may bring peace, comfort or skill to the patient if the matter be taken up in a businesslike manner soon enough after the onset of illness. It would seem reasonable to add illness, from the standpoint of certainty, to the inevitable death and taxes, when perhaps budgets and insurance for illness could be invoked to assist in necessary outlays without inviting financial disaster.

The problem of the nurse is similar to that of the other agencies of medicine—doctors and hospitals. Doctors must be provided with an income which will allow them to live in circumstances similar to those in which men of similar attainments live. Hospitals must pay bills for bread, meat, drugs, water and electricity, or these commodities will not be delivered to them. Executives, dietitians, office help and engineers must be paid salaries which will attract capable people from similar pursuits in the business world in order that a high standard of service may be delivered to the doctor and the patient. Bills and salaries must be paid by the patient, endowments or public funds. Less than \$2 per month per person is required to meet all expense of illness. Why should the vitally necessary requirements for life and health be carried by endow-

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ments, public funds or the doctor and nurse when radios, automobiles and cosmetics cost the public infinitely more and are seemingly paid for with avidity?

With an apparent surplus of registered nurses in cities during dull seasons, further competition from an inferior grade or class of nurse or attendant will drive the registered nurse from the field if the attendant can be attracted from some other field of endeavor by anything less in the way of pay than the registered nurse receives now.

**L. B. Rogers \***—In my opinion, the solution of the problem presented does not lie in the substitution of less skilled persons to take care of the sick for a lower remuneration. Trained nurses are paid little enough and I doubt if women with less training would work for a lower wage. There are many people who will mortgage their future buying high-priced automobiles on time payments, but who would complain very strenuously when obliged to pay \$6 per day for a trained nurse.

I have no specific remedy to offer to cure the condition, but I believe it can be improved if doctors will encourage the following:

1. Group nursing by skilled trained nurses:

- (a) In hospitals
- (b) In private homes.

2. Accident and health insurance or hospital bonds in some form where the expenses of physicians and nurses can be anticipated and guaranteed for a definite monthly sum.

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A code of ethics embodying the principles of professional conduct to govern the profession of chemistry has been formulated and adopted by the American Institute of Chemists. This code of ethics merits public esteem and justifies confidence in the integrity of the chemist. The institute has established a standard of proficiency of such excellence as to insure competent and efficient service on the part of its members.—M. L. Crossley, Science.

Health and morals are not infrequently interdependent, notably in the case of venereal diseases; but the regulation of morals may well be left to spiritual advisers, those who are or should be responsible for the bringing up of the young in the home, to the schools, to public opinion and, when immoral acts constitute infringement of the penal laws, to the police authorities.—Matthias Nicoll, Jr., J. A. M. A.

Henry James compared mind and faith cures, and concluded that a mind cure requires no faith, while a faith cure requires no mind.—Federation Bulletin.

## CLINICAL NOTES, CASE REPORTS AND NEW INSTRUMENTS

### KYPHOSIS DORSALIS ADOLESCENTIUM

#### REPORT OF A CASE

By A. GOTTLIEB \*

The rarity of this affection of the adolescent spine and the questionability of prognosis and treatment prompt me to report this case; especially so because of its improvement in a short time of three months under ultraviolet radiation and brace wearing.

I. B., a schoolboy of 16, with spinal deformity accompanied by fatigue but without pain. While previously in perfect health, the dorsal region of the spine began to curve about two years ago without any known cause. Corrective school gymnastics seems to have aggravated the deformity. Has had no previous orthopedic treatment.

**Examination**—Healthy-looking, muscular boy, well nourished and developed. No signs of rachitic rosary nor epiphyseal enlargements of deformities of the extremities. A round kyphoscoliosis is present in the mid-dorsal region which is fixed and cannot be obliterated by suspension. There is limitation of motion in this area without any limitation on the rest of the spine. No muscle spasm nor tenderness on pressure or percussion. A tentative diagnosis of vertebral epiphysitis was made and was substantiated later by further clinical, radiological, and laboratory findings.

The x-ray (Figures 1 and 2) revealed a slight double scoliosis and moderate kyphosis. The intervertebral spaces were diminished in width, were cloudy, mottled, and irregular. The outlines of the vertebral bodies were indistinct; the epiphysis enlarged, moth-eaten, and frayed.

To satisfy a worrying mother the boy was examined by Dr. K. Fishel, who determined clinically, by x-ray and tuberculin tests, that no primary tuberculous lung focus existed.

Notwithstanding a negative family and personal history of syphilis, the blood Wassermann was made and found negative.

**Treatment**—Patient was allowed to continue school work, but prohibited from participating in exercises and from doing weight-carrying. Was ordered to rest in the recumbent position several hours a day and to expose the body systematically to the sun and air. In addition to this he was exposed to incandescent light and to artificial ultraviolet rays every other day. For the protection of the spine and for a possible decrease of the deformity he was provided with a modified Taylor brace with pads to exert pressure upon the spinal prominence. After three months of this therapy the spinal deformity was visibly lessened, proved by tracings and by the doubling of the thickness of the pressure pads in the brace.

The x-ray showed at this time a definite restoration of form of the vertebral bodies; considerable deposit of

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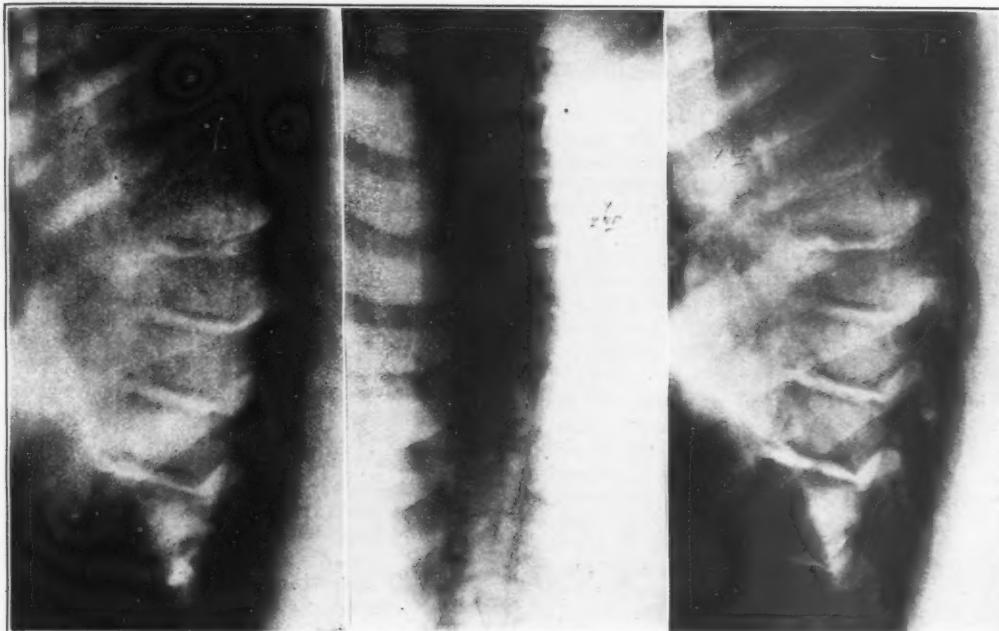


Figure 1—Moth-eaten and frayed appearance of anterior edges of vertebral bodies of seventh to tenth dorsal vertebrae.

Figure 2—Intervertebral spaces slightly wider, cloudy, irregular. Substance of bodies appear faded, atrophic.

Figure 3—Restitution of bone; better outline, less irregularity and fraying. Beginning hypertrophic changes on the edges.

bone and filling in of the area of rarefaction; the moth-eaten and frayed outlines had disappeared to a great extent, but spurlike changes were seen on the front edges of the epiphysis, as is found in cases of spondylitis deformans.

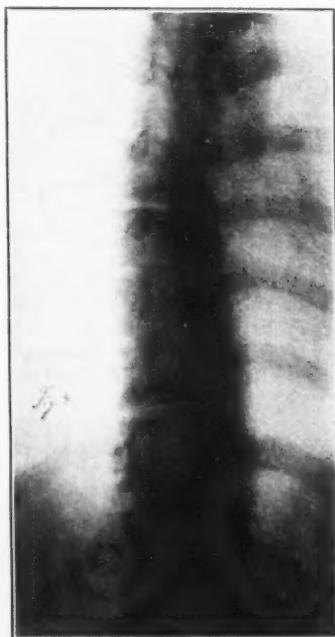


Figure 4—Contour of bodies more definite and clearer outline of the bone substance, as if atrophy is disappearing.

#### COMMENTS

1. This affection has been described under various names: kyphosis dorsalis juvenilis,<sup>1</sup> kyphosis dorsalis adolescentium,<sup>2</sup> vertebral apiphysitis,<sup>3</sup> and has been classed among other weight-bearing deformities of the adolescent age.

2. It is the result of the preponderance of the functional demands upon the spinal column over its functional capacity. The diminution of this capacity affects the deformity in virtue of bone changes, the nature of which is still under dispute.

3. Treatment should strive to reduce the functional requirements upon the spine, i. e., weight-bearing to be limited, recumbency practiced and protection enforced, and should aim at the increase of functional ability of the spinal scoliotope by stimulating ossification; sun and ultraviolet exposures, etc.

4. Occurring in the ages between 10 and 20, within the period when manual labor is begun, the industrial surgeon should recognize this condition and guard functional overstrain, lest compensation claims may be forthcoming if the deformity develops in the course of employment.

1. H. Scheuerman: Ztsch. f. orthop. Chir., 41:305, 1921.  
2. C. Mau: Ztsch. f. orthop. Chir., 46:145, 1924.  
3. J. Buchman: Jour. of bone and joint surg., 4:814 (October), 1925.

The health commissioner and the angler have much in common. One must use many kinds of bait to induce some people to accept health truths; sometimes the landing net of a strong compulsion is essential to accomplishment; there are few that rise to any lure that may be put out, and supreme patience always is necessary.—Ohio Health News.

The prolonged and permanent assumption of governmental functions by unofficial bodies, when and if the governing officials are financially and personally able to undertake them, is in my opinion a mistaken policy and one which inevitably must defeat the end sought.—Matthias Nicoll, Jr., J. A. M. A.

**OXYCEPHALY AND RICKETS  
IN ONE OF A PAIR OF SINGLE OVUM TWINS**

By F. F. GUNDRUM, M. D., Sacramento

OXYCEPHALY, a premature synostosis of various cranial sutures is rare, the cause unknown. The least vulnerable explanation is that of Stokes, "An abnormal twist in development or embryonal dysplasia." From a theoretical and speculative point of view, oxycephaly in one of a pair of univitellic twins is intriguing, though Newman says, "only in one character are the members of a polyembryonic set always identical. They are always of the same sex. In all other respects intra set differences of a more or less radical character exist." The oxycephalic twin also had rickets, his brother did not; interesting inasmuch as they had been living

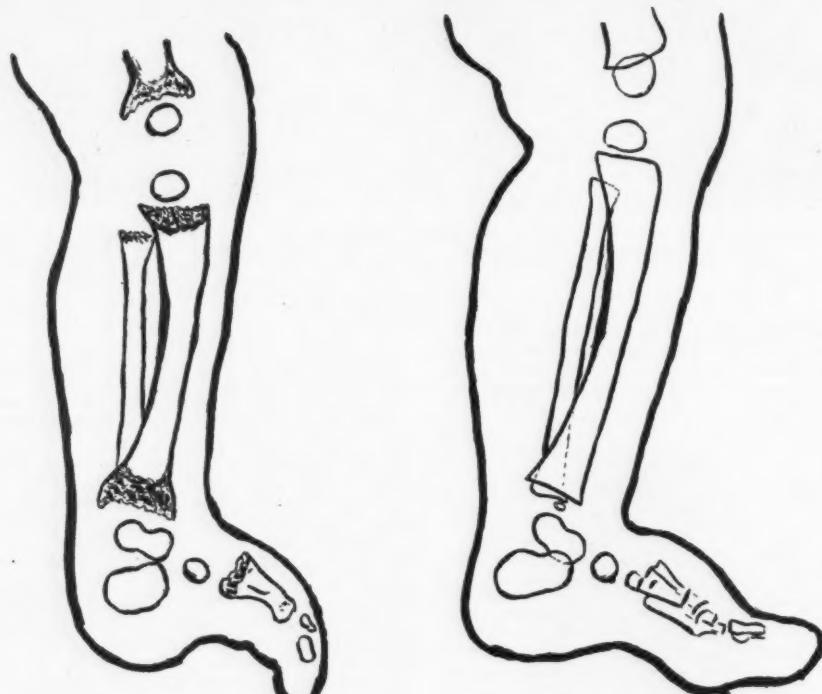
under identical environmental and feeding conditions.

**REPORT OF A CASE**

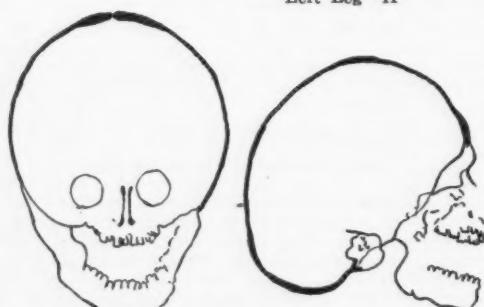
R; male child eight months old brought in by mother because of pallor, fretfulness, and failure to gain weight as rapidly as his twin brother H, who seemed healthy. The baby showed the pallor, rosary, expansion of long bone ends and bone tenderness of rickets. The anterior fontanelle instead of being larger than normal was closed and the head came to a well established peak on top. The mother consented to take both children to Zimmerman, whose x-ray films showed closure of cranial sutures as well as the changes characteristic of rickets. On account of the difficulty in reproducing negatives for publication, tracings of the bony outlines were made from the films.

Reginald Knight Smith, who had delivered the mother, very kindly looked up his records to find that "there was only one placenta," and he considers these indubitably univitellic twins.

Capital National Bank Building.



Left Leg "R." Rickets  
Left Leg "H"



Antero-Posterior Head "R"  
Fontanelle Absent  
Lateral Head "R"  
Lateral Head "H"  
Antero-Posterior Head "H"  
Shows Fontanelle Size



## EDITORIALS

### JAMES H. PARKINSON SAXTON TEMPLE POPE

Two families are desolate; physicians, patients, friends—thousands of each—are bereaved, and all citizens of California and many beyond mourn the passing of James H. Parkinson of Sacramento and Saxton Temple Pope of San Francisco.

Doctor Parkinson had been for many years a councilor and for several years chairman of the Council of the California Medical Association. Doctor Pope had been executive officer of the Association and a councilor. But the great work of both was in their service to the frail and suffering.

Both were leaders among men; general practitioners in the best sense of that phrase; worthy, useful citizens and, above all else, men. Biographical sketches by friends are published elsewhere in this issue.

### THE HOSPITAL CRISIS IN ENGLAND

Conservative medical and more general publications in England designate their hospital situation as a crisis—an economic, social and health crisis. As many of our hospital and health problems are quite similar to theirs, but as yet are less acute, and because we are traveling along the same road they have traveled, it may be helpful to notice their problems and what they are attempting for their solution.

England is the most completely institutionalized country in the world as relates to the care of dependents or those partially dependent because of ill health. There is a hospital or, perhaps more accurately expressed, an institutional bed for medical care for each 100 people, including the entire population of 38,000,000. Their hospitals are divided between government (local and general) and voluntary hospitals. The voluntary include public and private of several classes similar to those we have. As with us, many of those operated by local governments and particularly for the poor are not popular with the class of people they are designed to serve.

In an attempt to correct this situation, and at the same time to assist the voluntary hospitals with their finances, there has gradually grown up during the years a custom by which the government pays part or all the costs of service to certain classes of dependent and semi-dependent sick in the voluntary hospitals.

Even before the war their first disastrous step was taken when they passed a compulsory health insurance law modeled upon that of Germany. Under this law certain classes of people under certain conditions were compelled to pay a certain amount of their wages into a common government sick fund. When beneficiaries under the law were ill they were supplied service by doctors appointed by the government, and paid miserable wages or fees out of the government sick fund, a practice analogous to what is called lodge practice, hospital association or health association practice in this country. In its

effect this law not only branded people into classes as definitely as cowboys brand cattle, but it also branded the doctors and other agencies of health as well. A certain percentage of the doctors accepted service under this law and consequently accepted the small fees from patients who had no choice but to accept a service unsatisfactory alike to patient and doctor. Other physicians continued to serve their patients exclusively upon the basis of private arrangements.

Under the stringency of the war and the newer ideas of the equal rights of all citizens that grew out of the war, panel patients began to demand more and better hospital and medical service and they demanded that all evidence of discrimination be removed from them and that they be given the right of a personal choice in doctors, hospitals and other health agencies. These demands, and the large increase of illness and injury, forced the health problem to the front as one of the government's major problems.

After a restudy of their problems the government decided apparently that the doctors were the least dangerous link in their chain and they therefore reduced their already ridiculously low fees. But for once the worm turned; the panel doctors, as they are called, had also learned a lesson from Germany and they decided to refuse the cut and enforced their position by a strike, if you please, just as the panel doctors of Germany were on strike for similar reasons when the war broke out. After months of wrangling a patched-up truce was arrived at by the government compromising with the doctors as regards pay and extending somewhat the right of choice of doctor by the patients.

The hospital service became so financially embarrassed that something had to be done, and a largely attended conference was held by representatives of physicians, labor, hospitals, government, and other organizations. During the conference every agency presented its wishes and conclusions.

Mr. Somerville Hastings in speaking for labor said that "there had hitherto been in this country a very wealthy class and a poverty-stricken class, but in the future conditions would be such that the poor would depend less on the bounty of the rich, and probably the rich might have less to give. Experience had shown that social movements in the experimental stage were best managed by voluntary effort, but when such a movement became a necessity it was better to look for support to a central or a local authority." Continuing, this speaker contended "that payments by patients tended to act as a deterrent or to rob the poorest of the necessities of life and threatened to change hospitals into nursing homes for the middle classes. Workmen might be in this way contributing toward the cost of treatment of men better off than themselves. He did not doubt that people who were very poor considered it a disgrace and would suffer anything to hide it. Put very bluntly, he believed a man had only to be a good liar and dress poorly to enter any hospital, whatever his riches might be."

"The only way out of this impasse was for the state to shoulder the responsibility of providing medical treatment for all who needed it. Labor looked upon health as a national concern, and saw the

danger of leaving it to charity or private enterprise; it desired treatment centers to be set up in outlying districts, local or cottage hospitals in the smaller towns, county hospitals conveniently situated, and national hospitals in the chief cities. It would organize intimate co-operation between all hospitals and, where necessary, make easy transfer from one to another. This would have to be evolved by stages. Poor-law infirmaries should be taken over by local health authorities and converted into first-class general hospitals for use without the taint of pauperism. Many of the country mansions now being offered for purchase would make good convalescent homes."

Another side of the question was emphasized by Viscount Knutsford when he said: "If hospitals were controlled by the state there would be no grace added to the duty, none of that spirit which added beauty to duty. The voluntary hospitals had brought to the sick the best medical attendance and nursing in the world. The recent committee of twelve eminent men took evidence about voluntary hospitals and stated it would be lamentable if by our apathy and folly it was suffered to fall into ruin, and they recommended a grant of a million pounds, which a parsimonious government reduced by a half. *All the progress in medicine and surgery had emanated from the voluntary hospitals; public or state-managed hospitals could not have approached such a record.* If there was pressure work at voluntary hospitals it was done; there was no question of 'down tools,' or thought of overtime; no doctor worked with his eye on the clock. To thank a surgeon for coming down to the hospital at midnight to perform an urgent operation would be to insult him. The spirit in regard to those who came to their doors was not 'what do you want?'; it was 'what can we do for you?' and the object was to do it in the kindest way possible."

In discussing remedies the speaker said that "he would have taken off the income tax figures all contributions to hospitals, and a similar deduction should be made from death duties. *The general practitioner should be helped, not harmed.* Surely the best plan was to strengthen what was admittedly good, rather than to change to a system which history did not support. *State management would satisfy nobody.*"

On behalf of the panel doctors a speaker said that "he hoped the libel would be put to rest that directly a doctor became a public servant he lost his better feelings. The Labor Party would go a long way toward placing the management of the hospitals in the hands of the doctors themselves."

Dr. John Buchan believed that "the hospital problem in its present form owed its origin to four factors: (1) an increasing urbanization of the population, with a deterioration of the living conditions and an incoming of many serious cases of illness requiring hospital treatment; (2) the awakening of the health conscience of the people, causing a demand for further hospital provision; (3) more care and thoughtfulness in the means for the relief of poverty; (4) the increasing improvement and complexity in medical and surgical science, bringing within scope of the hospital many cases which previously could be treated at home. A way out of the heavy demand was found in the establishment of

*rate-aided hospitals, and the work of these had so extended during fifty years that they now provided 75 per cent of the hospital accommodation of the country.*"

At the close of the three-day conference, perhaps the largest and most widely representative hospital conference ever held anywhere, the following resolutions were adopted:

"1. The accommodation, equipment, and finance of hospitals generally are inadequate and must be supplemented.

"2. The geographical distribution of hospitals is uneven, leading to overlapping and the lack of co-ordination. The unit of such co-ordination should be such as to include a sufficiently large population.

"3. There should be a closer relationship between voluntary hospitals themselves, between the voluntary hospitals and the various hospitals provided by local authorities, between the curative and preventive medical services, and between the hospitals and the private medical practitioner.

"4. Some form of public assistance is essential if a complete and adequate hospital system is to be maintained, and developments should be directed to preserving what is best in the present voluntary system.

"5. The infirmaries at present operated under the Poor Law should be thrown open to all citizens and removed from all taint of the Poor Law."

There is food for serious thought in this review, particularly as England's acute problems were reached by traveling over the road on which we are following.

#### THE FEAR OF HEART DISEASE

Letters from physicians tell us that the propaganda about the enormous prevalence of heart disease is being carried too far; that otherwise sane people, particularly mothers and school children, are getting a "heart consciousness" phobia or "fear complex" that is not calculated to serve well the cause of health. A prominent physician and medical teacher asks us to correct some of the "nonsense" that is being published about diseases of the heart. Other doctors claim that some of their patients are leaving them to consult heart specialists, cardiologists, clinics, and health centers whose publicity seems to indicate that they have special knowledge about heart trouble.

Heart disease is, and always has been, a serious malady. It takes many lives and cripples many more. Any intelligent physician can make a diagnosis with sufficient accuracy of any heart disease—but no one else can. Any educated physician can give good treatment, including advice—no one else can. Any educated physician can arrive at the cause of the trouble in the vast majority of patients with a fair degree of accuracy—no one else can. Any physician can do any and all these things in his office, the patient's home or elsewhere. He does not, except in rare instances, need any elaborate or special equipment. What he does need, what the patient needs, and what the patient cannot get in any other way, is the personal service of the physician.

The cause of health will not be permanently served by swelling heart disease statistics by including in them the functional disturbances incident to

adolescence, lack of sane living, jazzed emotions and pressure from gas-bloated stomachs. There is profit in "curing" such "heart diseases," and the supply of such patients is being promoted by too much cheap publicity.

Time will take care of this fad as it does of all others.

Physicians can help by informing the public of the facts in a dignified way, and by discouraging circus posters, headlines, pictures in colors of bleeding hearts on magazine covers, and other methods of soap-box orators. What is the poor patient to do when one group of "doctors" scatter firebrands of fear, and another group tell him of the dangers and consequences of "fear complexes"?

#### THE NARROWING FIELD OF LIBERTY IN PERSONAL AND FAMILY HEALTH

Growing numbers of medical editors and medical authors are pointing out the increasing encroachments upon individual and family health liberty by the expansion of bureaucratic, corporation and other methods of organized practice. Medical organizations are becoming aroused, and some of them are taking action. This is hopeful, both in the interests of physicians and, more particularly, in the interests of the health of our citizens.

Corporations and other associations may not practice medicine legally in several states, and yet government, the greatest organization of all, ignores its own laws. The national government offers "free" (paid for out of taxes) individual medical service to many millions of people through nearly a score of departments and bureaus, conducted for the most part by nonmedically trained individuals holding their positions by political preferment. By dividing the country into districts, the population into classes and according to "previous condition of servitude," age, sex, occupation, infirmities, etc., they have the country very well covered with hospitals, clinics, health centers and correspondence courses operated by a surprisingly large retinue of employees of surprising varieties of attainments. They are nurtured by publications issued at public expense, some of which are essentially advertising matter, and by hordes of office and traveling agents on salaries.

National corporations, insurance, life extension; magazines with their medical departments; fraternal organizations; clubs, health and hospital associations and what-not urge all citizens to utilize their quantity-production medical services and live to be a hundred.

Mail-order "doctors" strain the resources of the postal authorities to handle their tons of medical advice and consultations by mail, and many of them also have local and traveling agents who are "high-pressure" salesmen.

State governments are also entering more and more into the practice of personal health through numerous bureaus and organizations; and wherever and whenever children or other citizens are brought together in crowds for examination, diagnosis, "inspection," "preclinical diagnosis," advice or other form of periodical medical or health service, one or all of several consequences ensue.

The doctors, nurses, teachers, technicians, clerks

or voluntary health workers who do the examining or give advice to the individual jeopardize the influence of the family doctor and thus introduce another disturbing element into the home, and threaten the faith of the individual in his health counselor.

The doctor who thus avails himself of the chance to examine another doctor's patient is all too frequently inclined to find, do, or advise something calculated to disturb the patient's faith in his former doctor, if not in all doctors, a faith that is still further jeopardized through incompetent medical service by incompetent persons.

There are people—plenty of them—who believe the substitution of impersonal medical service by government and private corporations for the personal service that characterizes present methods of the practice of medicine is desirable, and their conduct is with that end in view. Such opinions are not supported by much accumulated experience, and as an experiment it is fraught with many dangers.

The vast majority of physicians are opposed to the principle for sound reasons. The usual answer is that "of course doctors are opposed to state and corporation practice for selfish reasons." While this may be the motive of some, most physicians know that the socialization—governmental or otherwise—of medical practice would not decrease the private work of physicians who elected to continue to serve on a purely personal basis. It would practically force many young physicians to get their experience on a salary until their reputations warranted their changing to a private status. The ranks of such service would prove a haven for many doctors who for one good reason or another are not able to make a living in private practice. Some doctors also would prefer an assured salary to the greater risk of compensation on a fee basis and the greater energy necessary to succeed in the latter field. Salaried positions do not appeal to most doctors nor most people who need doctors' services. This is shown by the constant difficulty in securing enough doctors for the Army, Navy, Public Health, Veterans' Bureau, and similar dignified medical services. Many good doctors do go into these services, enjoy their work and make enviable names for themselves. That service of this kind is not fully appreciated by many who are entitled to it for nothing or only a nominal fee, every doctor in private practice knows full well.

Herein lies a great danger in extending official public health service so as to include personal health service for individuals, "free" alike to rich and poor. Some public health doctors thereby endanger their influence in real public health matters and they invite a public unrest, which is likely to be reflected in deficient appropriations even for their most important work.

The great promise of public health is not likely to be fulfilled as public medicine for individuals, but rather in exploring new fields and in more intensive action in those things calculated to prevent disease and promote the health of masses of people, leaving the field of personal health to collaborating personal health doctors.

## - *The MONTH with the EDITOR -*

Notes, reflections, comment upon medical and health news in both the scientific and public press, briefs of sorts from here, there and everywhere.

There is a vast difference between the physician giving charity to the needy one who applies to him for such services and the giving of his time and energy to the public in a matter that it is the plain duty of the public to provide for. The physician should give more heed and study to things of this kind and learn to discriminate between those matters which are truly altruistic and those which are not.—M. L. Harris, Chairman of the Judicial Council, A. M. A.

Little does the public know of the vast amount of uncompensated work in the alleviation of pain, sickness, and disease that is "carried on" by the medical profession. Perhaps there is no single fact which more sharply differentiates modern times from antiquity than the patient, quiet, unheralded, unrequited and generous service which doctors give to the poor patients in our great hospitals and elsewhere.—Lloyd Paul Stryker, Esq., Counsel Medical Society of New York, New York State J. Med.

The unwillingness of some physicians to render a certain service for less than a certain fixed fee is causing thousands of erstwhile prideful but poor citizens to join the vast drab army of charity seekers. This in our judgment is one of the causes for the growing demand for state medicine that none can fail to hear and none can silence save by placing the best of medical service within the reach of every citizen. Fortunately in most cases this is being done.—Editorial, Colorado Medicine.

**The Rockefeller Foundation** is rendering another excellent service in the publishing of "Methods and Problems of Medical Education," booklets.

The recent volume of the fourth series is an excellent expensively illustrated description of the "unit system" of clinical records as used at Presbyterian Hospital, New York. Some hospitals still cling to the obsolete methods of collecting and binding patients' records in volumes. This publication may help them.

The Foundation would render an equally fine service by issuing a publication showing the method of linking up a similar unit system of doctors' offices with that of hospitals.

There is a growing conviction that it is not always easy to distinguish between the harmful and the harmless with respect to the protozoa. Attendant circumstances, such as gastro-intestinal lesions, may sometimes render otherwise innocuous living forms objectionable in the alimentary canal for mechanical or other reasons. Furthermore, the number of expert diagnosticians in clinical protozoology is at present still somewhat limited.—J. A. M. A.

The vast majority of the medical profession will be found to be sympathetic with sane and efficient public health work, and there is something lacking in the character of a health administrator who is unable to obtain such sympathy.—Matthias Nicoll, Jr., New York State Health Commissioner, The Nation's Health.

American pediatric literature continues to contain many articles on breast feeding. Most of them, however, resemble closely articles which were written one hundred or more years ago, and contain little that is new. It is

doubtful whether the present method of expressing breast milk is any different from that in use generations ago, although it is better described. It is certain, however, that our forefathers did not use electrical breast pumps, which are proving most useful and are available to all at a moderate rental.—John Lovett Morse, Boston M. and S. J.

The editorial desk receives and discharges no inconsiderable amount of printed and mimeographed material classifiable as "available filler." Were one to use it all "as is" most of the content for the month would be on hand. Were one to write an introduction and express an opinion on each item the remaining portion of the white space available would be filled and thus all promoters could be accommodated.—Long Island M. J.

**Ng Ka Py Now Medicine**—Up to the time of going to press Chinese wine, known as ng ka py, was officially classed as a medicine and not a beverage, and could be imported and transported without violation of the Eighteenth Amendment or the Volstead Law.

In the last six years there have been no less than seven rulings, each changing the previous legal status of this liquid. Apparently no consideration was given to the question of its actual medicinal properties.—From an editorial, San Francisco Bulletin.

Now we know the psychology behind the naming of Pullman cars.

**Osler**—Three types of minds collaborate in medical progress: the investigating; the evaluating, collecting, blending, teaching; and the utilitarian—quantities rarely combined in one person. Osler combined these as did no other physician in history, and in this fact is the secret of his genius and greatness. The investigating side of this wonderful mind led Osler to blaze new trails into the unknown, which are now highways, but others have blazed even longer and clearer trails. His capacity for evaluating, collecting, teaching medical science is best shown in the periodic appearance of his *Principles and Practice of Medicine*, the *vade mecum* for doctors around the world, but others also have been great teachers. His ability to utilize medical knowledge and apply it wisely at the bedside made him a master healer, but others have been great healers. But history does not tell us of another who combined all these qualities within himself and who utilized them so well, and thus we see the secret of the most remarkable medical genius and the greatest physician of all time. He stands alone, peerless.

"We need controlled, conditioned air, just as we have controlled conditioned milk or controlled conditioned water." In these words J. E. Rush (*Jour. of American Society of Heating and Ventilating Engineers*, August, 1926), closes a discussion of ventilation that every doctor should read.

In "Post Mortems" and "Mere Mortals" (Doran) C. MacLaurin, doctor of medicine and teacher of surgery, University of Sidney, who died recently, undertakes an interesting scientific study of many characters of history, with particular reference to the possible influence their

certain or probable infirmities has had in directing the currents of human destiny.

Henry VIII, Anne Boleyn, Jeanne d'Arc, Edward Gibbon, Napoleon, Doctor Johnson, Nietzsche, Spinoza, Schopenhauer, Martin Luther, and many others are reinterpreted in the light of the trained medical historian. The picture is useful, but it is not a pretty one.

Physicians may profit from the stories, but the books should not be read by persons with unformed minds, and they certainly are not suitable companions for the young.

**A town started to install street lights, but when the fixtures were erected and before the globes had been put in, a flock of birds built nests in the empty sockets. The state law forbids the disturbance of a bird's nest.**

And now the town is waiting for the birds to tear down their nests so it can legally light its streets.—Nation's Business.

**T**here is now no reason for medicine hiding behind anything; there is every reason for her coming out into the noonday sun and keeping herself on exhibit. Advertise to the world more and more what medical science has done and is doing for the comfort and happiness of every man, woman, and child; and less and less how some doctor "performed a delicate operation," or has some prominent person under his care.—Editorial, South. M. and S., July, 1926.

**A**nd you fellows are so amazingly silent. Not long ago I heard a public speaker say: "Evolution! Heredity! I am sick of the words! There is just one heredity in this world of ours—we are the children of God!" I tell you it brought down the house. I glanced at Doc Jones; he didn't applaud; he was looking at a little boy near him who had the snuffles, and whose nose was beginning to saddle.

And I said, "Well, for land sake!"—Ohio Health News.

**I** just wonder when people in their ignorance will stop speaking about a case instead of a patient, and when physicians will stop talking about operating a case. Doctors who have attended ward schools should know better.—S. E. E., Indianapolis Medical Journal.

**T**he Rockefeller Foundation Review for 1925 by George E. Vincent, president of the Foundation, a pamphlet of sixty pages, contains much information interesting to doctors.

The work of the foundation is so extensive and varied as to stagger the imagination of the average reader of its doings.

"The well-being of mankind throughout the world" from the Seal of the Foundation, typifies policies that are being carried forward by amazingly extensive plans and the expenditure of untold wealth. Many extracts of President Vincent's review have been published in the public press, but the report itself is so condensed that quotation or comment misses much of a picture already in miniature.

**P**hysicians who need information for their patients about the Koch cancer treatment will find what they want in the Journal A. M. A. of June 21, 1926. Reprints of this editorial and article are available (A. M. A.) and a few of them wisely distributed will do much good.

**A**census prepared by the National Public Health Nursing Association gives a total of 11,171 public health nurses in the U. S. A. There should be 100,000.

Public health nurses are promoted and directed by 3269 agencies. One hundred would be too many. Fifty-one per cent of these directing agencies are governmental. State medicine is prospering. Fifty-nine per cent of the

3000 + counties have no public health nurses. Nine per cent would be too many.

Seventy-four per cent of these nurses are working in cities of over 10,000. This is about the reverse of what should be.

What are we going to do about it? Quien sabe!

Walter Addison Jayne's "The Healing Gods of Ancient Civilization" (Yale University Press) is all that its title suggests. The contents of this useful book of 500 + pages are well described by the publishers, who claim it to be "a definite summary of the period before the art of healing had come out of its primitive devotional and mythologic phase, its era of soothsaying and magic."

Any doctor who aspires to more than a modicum of medical culture will find pleasure and information in a leisurely perusal of this book.

In speaking before the Montana Medical Association recently, W. J. Mayo announced that, in the future, no physician or surgeon would be accepted on the staff of the Mayo Brothers' Hospital at Rochester who is not a member of the Medical Officers' Reserve Corps if he is physically fit.

The speaker also said that he is urging all members of the Mayo Brothers' staff to send their sons either to schools having reserve officers' training corps or to the citizens' military training camps. He declared that these youths are the backbone of the nation's future defense, and the cadets of today will be the officers of tomorrow.

In transmitting the newspaper clippings of this address, officers of the Army add: "We need all the help we can get to fill the small percentage of remaining vacancies in this Corps Area. Utah and Montana have already enrolled more than 100 per cent. Nevada has just sent in more applications than are necessary to fill its quota. Oregon and Wyoming are both 91 per cent filled. But California—with 61 per cent of all the doctors in the Corps Area—has only given about 62 per cent of its quota and still lacks 478 Medical Reserve Officers. The only way to fill these vacancies is to bring the matter again to the attention of the medical profession of California."

California, at least in certain sections, is not showing up well in the publicity about progress in completing the personnel of the M. O. R. C.

Physicians interested in knowing more of the importance of this movement to our country, and particularly to themselves, should address the Surgeon, Ninth Corps Area, Presidio, San Francisco.

Some rural legislators do not believe in the descent of man. Alas, that they should furnish such conclusive evidence in favor of the latest evolutionary theory that man is but a stage between the monkey and the ass.—Boston M. and S. J.

Some very estimable physicians seem to believe that dabbling in the unpleasant field of politics or attacking the quack on his own ground is undignified and tends to dishonor scientific medicine and lower its prestige, but we believe that there is little logic in this contention, for the more intelligent and better qualified elements in society have a responsibility with respect to those who are easily misled.—Editorial Boston M. and S. J.

**D**emosthenes McGinnis says that the trouble with extra teeth in the prohibition law is that they are so liable to become infected.—Philadelphia Evening Public Ledger.

Man can live without food for thirty days, without water for seven days, and without air for three minutes; but the air should be filtered through the trees, flavored with sunshine and washed with the dew of heaven.—Ohio Health News.

## MEDICAL ECONOMICS AND PUBLIC HEALTH.

The Telephone Exchange of the Los Angeles County Medical Association continues to grow in interest and usefulness to physicians and the public.

"It is a well-known fact that Los Angeles is the headquarters of nearly every cult and ism which attempts to prey upon the bodily ills of human beings. The tourist and the newly arrived resident were absolutely at the mercy of these irregulars until the establishment of the Telephone Exchange. Formerly, in case of illness, the layman was compelled to ask for the name of a physician from a chance acquaintance, and too frequently received advice which resulted in their calling unqualified and often unlicensed fakers. As a result of years of education and propaganda it is generally known in this locality that by calling the Exchange, VAndike 1221, the names of several reputable and well-qualified practitioners or specialists may be obtained at once.

"The laity realizes that the Association has 'nothing to sell,' and as a result the Exchange is now regarded with a confidence which is of the greatest value to the medical profession in its war on sectarian and irregular healers.

"The Exchange is now recording more than 11,000 calls each month from patients who wish to locate their physicians. During April, 1926, calls were received from patients for more than 670 members of the Association."—Bulletin Los Angeles County Medical Association.

Aren't we baying at the moon in talking about taking public health out of politics? Is it possible under our form of government to make important public health positions less political than those of sheriff, chief of police, and any other major offices which are essentially parts of government?

There are just three methods of selecting public servants: by election, by appointment, and by so-called merit system. The first two are frankly political, and the other actually is a buffer method that produces a staggering number of misfits.

Theorists who orate about divorcing public health from politics forget that our government is politics in action; that politics is public opinion as expressed by voters; that health officers are servants of that government and cannot possibly be anything else. They cannot be above the government, and the only way they may avoid its mandates is to put public health on a religious basis. Religious fanatics are the only people permitted to practice personal health and public health medicine without a license from government.

The movement to promote the merit system of selecting public health officials seems to most of us to promise most, but the experiences of recent years have not been conducive to enthusiasm for it. One of the criticisms of the usual appointive method of selection is, that incompetents are selected under it and that changes in personnel are too frequent to permit uninterrupted progress.

It must not be forgotten that changes are also frequent among health officers selected by the so-called merit system and that lack of co-operation by other branches of government, by doctors and by the public may so nullify the efforts of a civil service health official that his accomplishments may be less than those of a less well prepared officer who holds the confidence and support of his fellow government officials and therefore an element at least of the nonofficial public.

Most of us believe in whole-time public health officials, and we believe that they should be selected with care, well paid, and discharged when they become misfits.

Public health, no more than personal health, can be crammed down the throats of people, nor may public officials be assured of greater security of tenure than

other servants of the public—at least not while we are a democracy governed by elected and appointed representatives or those selected by any other system not infallible.

The medical inspectors in our public schools will have to be shaken out of their torpor. I do not wish to be understood as saying that these inspectors have not accomplished any good, but things have reached a point where we cannot continue our present type of examination and be satisfied. You know the type of examination!—Louis I. Harris, New York Health Commissioner, Long Island M. J.

**Two Interesting Rulings**—Chief Counsel Bianchi of the California Board of Medical Examiners has given his opinion to the effect that those licensed to practice chiropractic are not entitled to practice obstetrics.

Attorney-General Webb rules that physicians and surgeons are "permitted to practice chiropractic without a license from the Chiropractic Board."

This decision resulted from the recent arrest of C. D. Crutcher, M. D., by the Chiropractic Board on the charge of practicing chiropractic without a license, as related in "news items" of the August issue of CALIFORNIA AND WESTERN MEDICINE.

The 1925 report of J. J. Frey, Chief Bureau of Dairy Control, California Department of Agriculture, contains information of value in promoting and protecting health.

The total production of milk fat in 1925 was no greater than the preceding year, being 125 + million pounds. The per capita consumption of butter for the year was 21.72 pounds; of cheese, 6.47 pounds; of cottage cheese, 2.54 pounds; and of ice cream, 2.63 gallons.

The production of milk increased from 92 + million to 101 + million gallons. According to a table showing the utilization of milk fat, increased use is being made of both market and condensed milk and cream and ice cream, but the proportion used as butter and cheese shows a corresponding decrease.

It must be apparent that the medical profession and the public health workers are one and indivisible, that they have a common cause, that they have a common ideal. If we dedicate ourselves to co-operative action along these lines and if you will make me your mouth-piece, so long as I enjoy tenure of office, I can be more vocal and apparently can be quoted more often than the rest of you, with good grace and without loss of professional dignity. By virtue of that fact you ought to instruct me, you ought to advise me continually of the problems that come home closely to you, and it is my hope and wish that I may be not only receptive and reasonably intelligent, but that I may be responsive and able to carry out the messages which you give me—messages which aim toward the promotion of public health. I hope that I may carry them out as well as it is possible to do and not discredit the medical profession, whose object is primarily the prevention of disease, whether it be in hospitals, or in the health department, or in our daily ministrations to patients. Your speech in the homes is so much more effective than the printed work which we aim to deliver under varied guises. Whether it be in the confines of the hospital or at the bedside we are scientific educators, and it is well that we work in concert.—Louis I. Harris, New York Health Commissioner, Long Island M. J.

**At the 1925 Session of the Tennessee Medical Society**—"Resolved, That all druggists in Tennessee who desire the promotion of medical science be requested to discontinue the sale of nostrums and quack medicines, and that in our purchase of drugs and medicines we will prefer such as may adopt this course."

The contract community doctor idea developed several years ago to assure medical service to communities

not otherwise able to get or to retain physicians is to have a further trial at Gove City, Kansas. Members pay \$12 to the bank every six months, which entitles them to regular medical service and medicine (not including obstetrics or surgery). People living outside of a ten-mile radius pay 75 cents per additional mile, extra.—Nebraska M. J.

We see medicine face to face with an industrial and commercial civilization struggling to adjust itself to new and strange conditions.

We see new forms of organization springing up; new forms of corporate effort shaping themselves and on every side loosening of the personal relation of doctor and patient on which we firmly believe the safety of both depends.

The struggle is only beginning, but it will be sharp and decisive, for in the processes of incorporation and of machine-like organization that have affected the life of our time, medicine has been left behind. The next step is to organize this remaining "industry" properly and subject it to the well-known principles of scientific management. Shall we submit? We never will, for it is our belief that this mechanization of medicine cannot be accomplished with satisfaction or success, and that attempts in that direction impede real progress in solving the many problems that do and will confront us.

If we are right we must be able to offer something better and to demonstrate its value in action. We must ourselves reorganize medicine.—Bulletin of Medical Society of the County of Kings.

**Dr. Charles H. Herty**, says the "New York Times," recently pointed out that we spend annually \$1,015,000,000 to keep our 115,000,000 bodies in repair, as follows:

Drugs, including patent medicine.....	\$ 500,000,000
Doctors' services (estimated on basis of average income per doctor per year of \$1500) .....	220,000,000
Five per cent interest on the \$624,000,000 of hospital investments in lands, buildings and furnishings .....	31,000,000
Hospital maintenance .....	264,000,000
	<hr/>
	\$1,015,000,000

The mere investiture of a man with the degree of Doctor of Medicine does not wipe out his instinctive human revolt against injustice and exploitation. Socialize the practice of medicine, as you inevitably will under state medicine, and the best men will seek other lines of endeavor, if any there be left, where their talents and abilities, unhampered by artificial bureaucratic restrictions, may have free play and proper recognition. And then in time we may witness the deplorable spectacle of medical men striking for higher wages. They struck in Ireland for \$35 per week. Or we may find the panelized doctor making a second visit to deliver the placenta, thus earning another small fee of which there must be many if their sum is to be sufficient to meet his monthly obligations. It has been so reported from Germany. Or we may see the American medical profession through committees of its more widely known members, soliciting their colleagues in other countries for money gifts to keep its members and their families from starvation. Have not such appeals as this come to us out of Austria?—L. L. Bigelow, Ohio State M. J.

Is our criticism of the various health agencies—official and unofficial—quite justified? It is not justified until medical men individually and collectively reassume or resume the functions that they have, consciously and unconsciously, permitted themselves to abandon. . . .

There is no question at all that the health department ought not to assume the function of medically treating cases except in a few special instances. It is our func-

tion, for instance, to care for communicable disease cases in hospitals, but we must not, under cover of that necessity, treat venereal disease cases.—Louis I. Harris, New York Health Commissioner, Long Island M. J.

The 1925 birth rate in New York State, 19.4, was the lowest ever recorded. Of the several large subdivisions of the state the rate was lowest (13.0) in the group of incorporated places under 2500 population. The birth rate in the rest of the rural territory was 14.2; in New York City, 20.3; and was highest, 21.2, in all the other urban communities considered as a unit.

The New York Department of Health urges parents to take their children to their private doctors for the toxin-antitoxin treatment. The department also holds periodic clinics to serve those who apply.

There is little question that the medical profession has had just cause for grievance against those public health officials who, taking advantage of their legal prerogatives, have ridden roughshod over practitioners of medicine in the furtherance of this or that plan of public health work, often ill-considered and ruthlessly carried out, totally without regard to the rights and privileges of the medical profession and not infrequently of the public.—Matthias Nicoll, Jr.

No person shall maintain, operate or conduct an x-ray laboratory or advertise or hold out to the public that an x-ray laboratory is maintained, operated or conducted, wherein radiographs are taken, diagnoses made of human beings examined or treated by x-rays, without a permit therefor issued by the Board of Health, or otherwise than in accordance with the terms of said permit and with the regulations of the said board.—Section 107, N. Y. Sanitary Code.

Just as soon as means by physicians are supplied for caring for children of preschool age and giving them the constant medical supervision and oversight to which they are entitled, the Health Department should remove itself from the picture.—Louis I. Harris, New York Health Commissioner, Long Island, M. J.

The associations of pharmacists of the United States have launched a movement to give physicians better day and night service in supplying biologics and emergency service in general. They feel these services to be an increasingly important service that should be handled by registered pharmacists everywhere.

The alleged medicinal efficacy of slightly radioactive waters and other slightly radioactive preparations has been found to be much misrepresented, say officials of the Bureau of Chemistry of the United States Department of Agriculture, who, in the enforcement of the Federal Food and Drugs Act, have made a nationwide survey of waters and drugs alleged to be radioactive.

The products analyzed for content of radium included hair tonics, bath compounds, suppositories, tissue creams, tonic tablets, face powders, ointments, mouth washes, demulcents, opiates, ophthalmic solutions, healing pads, and other preparations in solid, semi-solid and liquid form for which therapeutic value because of alleged radioactivity was claimed. Only 5 per cent of the products analyzed and claimed to be radioactive contained radium in sufficient quantities to render them entitled to consideration as therapeutic agents and then only in certain very limited conditions, say the officials.—United States Department of Agriculture Press Service.

Certain contagious diseases are absolutely prevent-

able now and parents should be ashamed to have their children catch them. Thanks to the many cults and anti-vaccination societies smallpox has so increased in California that we now rank with Russia in the number of cases of this deadly disease.—California Board of Health Weekly Bulletin.

In general it seems to me that trustees give far too little time and thought to the hospital; too often their position is much that of a figurehead; they attend meetings too infrequently and too perfunctorily; their contact with the professional staff in their work is too slight.—Henry A. Christian, The Modern Hospital.

**Every newborn baby requires a bandage or binder to hold the navel dressing in place, to prevent rupture, and to keep the abdomen warm.**

The Thermo-Tex Baby Binders fulfill these requirements; they are made of pure wool filling, long staple cotton warp, and contain no rubber. It is said that these binders will not slip and will not hinder respiration. They may be washed with soap and hot water, and dried on a flat surface without stretching.

The binders come in sets of three and are made in two sizes: 4 inches wide by 2½ inches long, and 6 inches wide by 18 inches long. They are manufactured by Becton, Dickinson & Co., Rutherford, New Jersey, advertisers in CALIFORNIA AND WESTERN MEDICINE.

"In purpose and policy the League stands for accomplishments that merit the fullest co-operation of the doctor. Members are pledged to assist in every way the ethical practice of Ophthalmology.

Only by enlisting the co-operation of the doctor can the League expand to its fullest usefulness to the medical profession.—Reproduced from an advertisement of the Opticians' League of the State of New York, carried in medical magazines."

An organization of opticians with these purposes should prosper. A similar organization ought to be helpful in other states.

Concerning free medical service to the well-to-do in the name of health conservation for the community, a well-known member of our Association informs us that the public schools in his small city, aided and encouraged by the Parent-Teachers' Association and a number of other uplift organizations, pulled off a stunt that, for downright imposition, takes the cake! The uplifters gave out the information publicly that enlarged tonsils and adenoid tissue are the cause of much ill health as well as mental backwardness in children, and that to correct this evil in the schools of the community an operative clinic would be held regularly on every Saturday morning, at which parents could bring their children for operative attention without charge, and that, figuratively speaking, the clinic would continue until every last tonsil in the community had been slaughtered. However, these uplifters counted their chickens before they were hatched, as a few self-respecting medical men who had been counted upon to do the work refused to be a party to such stimulation of dependency, and to add to the difficulties a given number of parents had the good sense to tell the school inspectors that they would have the tonsils and adenoid tissue removed from their children when and where they pleased, and that they would pay for the services like any other self-respecting individuals.—Jour. Indiana M. A.

The vote of the doctor is of vital importance to the welfare of our country. This places a special obligation upon him. In common with all good citizens he must help to decide issues that are to be decided at the polls. His obligation is enhanced through the fact of his education and his responsibilities, and again increased in importance by his special knowledge of public health matters, which are of vital import at this time. No doctor can afford to stay away from the polls this year, and no

doctor who goes to the polls without giving careful and thoughtful consideration to his obligations is measuring up to his responsibilities.—Texas State J. Med.

"Public health is today a definite and distinct science and those who practice in this field are members of an actual profession, a new one, perhaps, but a real one, nevertheless. *It is not a branch of medicine*, though physicians like to look upon it as such. . . .

"Public health, then, is the science and art of disease prevention, health promotion and life prolongation. It deals with man and his environment, both of which are controllable matters.

"The sanitary engineer was not only the epidemiologist who demonstrated the mode of infection (typhoid fever), but also the eradicator of the disease. The sanitary engineer has done the same service with the mosquito-borne diseases, malaria and yellow fever, and has likewise almost banished hookworm from North America. . . .

"It is estimated that there are at least 20,000 positions in this country in official or unofficial health work, though, of course, most of them are now occupied by so-called sanitarians. . . .

"A recent survey made by the American Public Health Association showed that 7 per cent of the health officers of seventy-two cities having a population of 100,000 or over had received neither college nor professional training."—James A. Tobey, Scientific Monthly, August, 1926.

"No amount of so-called health education for the masses, or singing songs about carrots and calories, or boosting the milk bottle, or swatting the fly, surely affected the body and mind of our own particular Jacks and Jills. . . .

"After all, this public health we hear so much about is nothing more nor less than the sum of our very own individual and personal healths. *There is no such thing as public health apart from the well-being of each child and parent of the land.* The information may well be public, but its application is personal. . . .

"The Sheppard-Towner law has carried the message of prenatal care to an army of grateful women in all our states, and still greater benefits will follow as the good news of preventive services for expectant mothers reaches every family in the land. The universal use of baby stations has, by keeping the healthy baby well, from birth to the age of one or two years, reduced the infant death rate from 250 to 75 out of every thousand babies born."—Haven Emerson, Delineator, September, 1926.

These are interesting utterances significant of the trends of public health as it is being promoted by some teachers in the field—"new profession" for the practice of personal health medicine by the public health official. In a word, a new line of approach to the goal of state medicine.

Every mother, doctor, nurse, and other person who has had to advise or carry out the preparation, sterilization, storage, often transportation, and serving of synthetic baby food, will find their problem much simplified by the improved and simplified baby bottle basket designed by Dr. John Homer Woolsey and which is being distributed by the Sterile Baby Bottle Basket Company of San Francisco, whose advertisement is published regularly in CALIFORNIA AND WESTERN MEDICINE.

No one thing is contributing more to the deserved popularity of certified milk than the far-seeing progressive stand taken by certain associations of certified milk dealers and distributors. The national association is becoming quite active in national advertising, and we are particularly pleased to announce the beginning in this issue of a page advertisement of the California Certified Milk Producers' Association, with headquarters at Los Angeles.

California already holds an enviable position in infant mortality and nothing will contribute more to the further

lowering of this mortality than the increased use of certified milk, and it is encouraging to see that the producers and distributors of this wonderful health food are taking advantage of the most promising method of increasing this consumption by advertising extensively through the legitimate medical publication of the doctors of the state.

The methods and standards of this association are those of the American Association of Medical Milk Commissions, which means standards devised by and wholly acceptable to the organized medical profession.

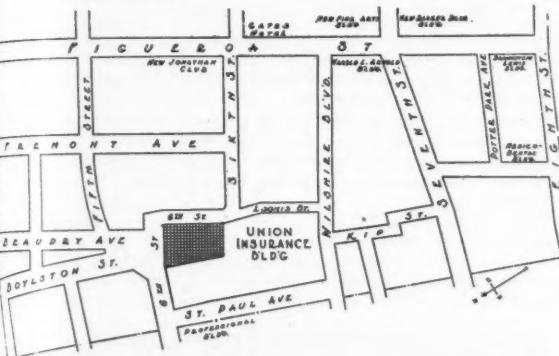
Your nearest certified dairy and distributor may be readily determined by examination of the advertisement and any special information about certified milk may be obtained by addressing the secretary of the association, 215 West Sixth Street, Los Angeles.

We are pleased to call attention to the very attractive advertising of the *Union Insurance Building*, Los Angeles, in this issue of CALIFORNIA AND WESTERN MEDICINE. Phy-

notes that, of about 300 samples of drugs examined, nearly 30 per cent were substandard or otherwise illegal. An interesting departure from the usual program of inspection is represented by the study of the strength and quality of medicaments obtained on physicians' prescriptions. Three simple prescriptions were chosen. In the case of a prescription calling for a solution of potassium iodide of definite strength, twenty-seven of fifty-seven samples examined were within 5 per cent of the strength demanded; fifteen were within 10 per cent of that strength, and fourteen varied from the required strength by more than 10 per cent. Again, in the instance of a prescription calling for a solution of arsenous acid of the strength stated in the United States Pharmacopeia, two of twenty-two samples examined were not the article demanded, but another preparation of like arsenic content (Fowler's solution); nine varied from the required strength by more than 10 per cent, and ten samples were within 10 per cent of the strength demanded. The third prescription called for aromatic spirit of ammonia. Of forty-three samples examined twenty-five were less than 90 per cent of the required ammoniacal strength.—Jour. A. M. A., July 3, 1926, p. 35.

It is with the prime purpose of reducing accidents and possible tragedies of this character that CALIFORNIA AND WESTERN MEDICINE encourages the advertising of pharmacies that are competent and make a business of filling prescriptions accurately and safely and of communicating, when questions of doubt arise, with physicians for preferring their wishes. It is upon this basis that the advertisement of the Exclusive Prescription Pharmacy of Los Angeles and Pasadena was accepted for the last and succeeding issues of our magazine, in addition to the advertisements of those pharmacies we have been carrying for a long time, as follows: Broemmel's Prescription Pharmacy, San Francisco; Exclusive Prescription Pharmacies, San Francisco; H. L. Ladd, San Francisco; Lengfeld's Pharmacy, San Francisco; O'Ferrall Dispensary.

Space cannot be purchased in CALIFORNIA AND WESTERN MEDICINE by a pharmacy not qualified and whose conduct is such as to warrant the conclusion that they are not rendering service of this quality. Legitimate pharmacists of the kind whose collaboration is needed by the medical profession and the public are recognizing more and more, by action of their national and state associations and by the ethics of individual pharmacists, that the high quality technical service they render to physicians and their clients is often of greater importance than the profits they may make from the sale of those things that go to make up the inventory of the average drug store.



sicians and dentists and other medical agencies are rightly becoming more and more particular in the location of their offices and especially in who their neighbors are in the same building. We feel in promoting advertising of this kind that we are rendering service to physicians and to the public quite as much as we are to the ethical advertisers to whom we sell space.

Quite in keeping with this same principle is announced, beginning in this issue, the *California Medical Building*, Los Angeles, in connection with the Albert Soiland Radiological Clinic, which has been for some time, and will continue to be, a "paying guest" in our publication.

P. D. L. Concentrated Cultures of *Bacillus Acidophilus* as prepared by the Physicians' Diagnostic Laboratories, Oakland, California, are Council accepted products. This organization, whose announcements appear regularly in CALIFORNIA AND WESTERN MEDICINE, is prepared to supply the fresh active cultures of these organisms directly to patients upon the orders of physicians.

Among the most important and often least effectively served responsibilities of a physician are those unavoidably connected with the business side of his professional work and contacts. Old-fashioned collecting agencies do not and cannot meet the situation. The Doctors' Business Bureau, whose advertising in CALIFORNIA AND WESTERN MEDICINE is renewed in this issue, have by a happy combination of business services to doctors, established through many years of ethical contact a standing in this and nearby states and a reputation for fair dealing that is pleasing an ever enlarging clientele of members of the legitimate medical associations. They now have offices in the Balboa Building, San Francisco, and the Brockman Building, Los Angeles, where they invite the co-operation of members of the California Medical Association only.

**Filling the Physician's Prescription**—The latest report of the Connecticut Agricultural Experiment Station

An English investigator says it costs \$11 per month per person to keep clean. The Chicago and Illinois Hairdressers' Association reports that it costs \$7 a week to keep beautiful. Included in their dollar-a-day budget are: a shampoo, \$1; tonic rub, 50 cents; marcel wave, \$1.50; facial massage, \$2; manicure, \$1; eyebrow arch, \$1; grand total, \$7. The conclusion is that to be both clean and beautiful would cost \$44 per month.—The Nation's Health.

Every doctor should take a vacation for a few weeks each year. Get away from the regular grind. Not to engage in any kind of work, but a change from the regular routine of life. Different scenes, mingle with different people. It is a form of rest for the mind and body, and when a doctor returns to his labor he has more vigor and is better fitted for his professional duties. A change will help every doctor; he will feel better and it will prolong his life.—Indianapolis Medical Journal.

**Seventy-eighth Annual Session, A. M. A.** — The Board of Trustees of the American Medical Association has unanimously decided on May 16-20, 1927, as the date for the Seventy-eighth Annual Session of the Association, to be held in Washington, D. C. William Gerry Morgan will serve as chairman of the local committee of arrangements.

## CALIFORNIA MEDICAL ASSOCIATION

W. T. McARTHUR, M. D.	President
PERCY T. PHILLIPS, M. D.	President-Elect
ROBERT V. DAY	Vice-President
EMMA W. POPE, M. D., San Francisco	Secretary and Associate Editor for California

### EXTENSION LECTURE PROGRAM

The yearly revision of the Extension Lecture program of the California Medical Association is in progress. Every lecturer on the present list of speakers has been invited to revise the titles of his lectures at this time and submit the revised program to this office for publication.

Any member not on the present list who desires to be included in this service should at this time furnish the State Association's office his name and program. When lantern slides are used to illustrate lectures a notation to that effect is helpful. Lecturers are permitted the use of the Association's lanterns in this service, and may secure them from the office, 1016 Balboa Building, between the hours of 9 a. m. and 5 p. m. daily, except on Saturday, when the office closes at noon.

It is earnestly hoped that interest in the Extension program will be stimulated by the submission of an enlarged and varied program.

### MEETING OF THE COUNCIL, C. M. A.

The next meeting of the Council of the C. M. A. will be held in the Hotel Biltmore, Los Angeles, September 18, 1926.

### MARIN COUNTY

**Marin County Medical Society** (reported by J. H. Kuser, secretary)—The Marin County Medical Society met on July 29 at 8 p. m. at Doctor Jones' office. President Lanrock called the meeting to order. The following members were present: W. F. Jones, F. M. Cannon, P. Day, C. F. Larson, G. M. Landrock, Charna Perry, E. W. Clark, and J. H. Kuser.

The minutes of the last meeting were read and approved. A communication from the A. M. A. in regard to addressing a summer school at Fairfax was read, and Doctor Cannon appointed by the chair to address the school on health matters and particularly to mention the two publications "Hygeia" and "Better Health" as the two mediums whereby the general public may get proper information on health matters.

A communication from the A. M. A. regarding medical relief in disaster was read and approved, and cooperation of the society as per enclosed suggestions to be counted on when necessity arises for same.

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### SACRAMENTO COUNTY

**The Sacramento Society for Medical Improvement** (reported by Bert S. Thomas, secretary, society editor

pro tem.)—During the months of July and August this society does not meet in regular session, as the call of the mountains and sea takes most of the profession away during a portion of these two months. One of the first to hear the call of summer this year was Harry R. Baird, who toured the southern part of the state and parts of Mexico.

A recent visitor in our midst was our former colleague, "Jo" Crawford. Crawford has been in Philadelphia absorbing special instruction in ophthalmology and Big League baseball. He reports that he is leaving this best part of California permanently, and is to be established in San Francisco, associated with Walter S. Franklin.

Albert K. Dunlap, superintendent of the County Hospital, is now established in the recently completed beautiful, new superintendent's home, built on the grounds of the hospital.

A recent appointment is that of Leo W. Farrell, who succeeds Thollow Binkley as city emergency surgeon.

A radiogram any Saturday or Sunday will catch George S. Iki on our full northern trout streams.

Angus McKinnon, formerly intern at the Sisters' Hospital, and Norris R. Jones, who held a like position at the Sutter Hospital, have now opened offices for the practice of medicine in our city.

Harvey N. Strader, after many years of medical practice in Sacramento proper, has given up the active practice of medicine within the city and will confine his medical activities to calls at his home in north Sacramento.

Mr. Secretary (as Gundrum puts it) spent two weeks at Camp Del Monte with the 184th Infantry. This last is mentioned so that you may know that there is a true personal element in it when the advice is given to heed the call of J. Wilson Shiels and Colonel Munson:

"You will never enjoy an outing quite as pleasurable as that which can be afforded you by a Reserve commission in the Army."

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### SANTA BARBARA COUNTY

**Santa Barbara County Medical Society** (reported by Alex C. Soper, Jr., secretary)—The regular monthly meeting of the society was held at the Cottage Hospital, Monday, August 9, in the staff room. Present were twenty-three members, and Doctors Bianchi of Ventura and Merrill and Schultz of Santa Paula.

In the absence of the secretary P. C. Means was appointed to act in his stead.

Nathaniel H. Brush presented a paper read at the Oakland meeting on the "Treatment of Delirium Tremens," which was discussed by Bagby, Means, and Ullmann.

Henry J. Ullmann talked on the "Removal of Hair by the X-Ray," and told of a visit made to him by "Jules Marston, Ph.D.," who has recently opened offices here and advertised widely his removal of hair; this man quickly exposed his ignorance of the fundamentals of x-ray therapy and use. Doctor Ullmann described the dangers of permanent injury to the skin by such treatment and quoted many world authorities warning of its harmful effects in a considerable percentage of cases. He also discussed what should be the attitude of registered physicians when questioned about this by our friends and patients. The man in question is said to have been fined \$100 in Los Angeles for practicing medicine without a license.

Rexwald Brown presented a carefully written paper on "Is the Medical Profession Coming Under Control of the Laity?" which discussed the attitude of the public toward our profession and its causes, urged interest and work in public affairs and more active control by physicians of hospitals, health work, etc. The paper was closely followed, and discussed by Doctors Ullmann, Ryan, Stevens, Allen Williams, Eaton, Brush, Pierce, Means, and Robinson.

## DEATHS

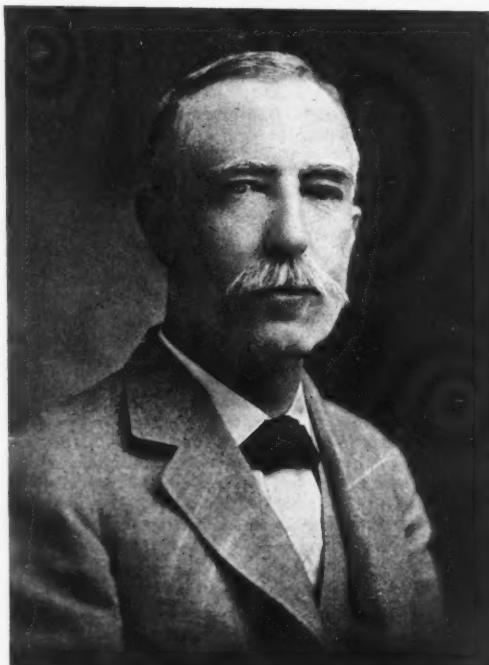
**Forrest, Richard Augustin.** Died at Occidental, July 13, 1926, age 66. Graduate of Bellevue Hospital Medical College, New York, 1883. Licensed in California in 1892. Doctor Forrest was a member of the Sonoma County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

**Murphy, Mary Turnbull.** Died at San Francisco, June 17, 1926. Graduate of Cooper Medical College, California, 1903, and licensed in California the same year. Doctor Murphy was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

**Myers, Mark C.** Died at American Falls, Idaho, July 17, 1926, age 65. Graduate of the University Medical College, Kansas City, Missouri, 1897. Licensed in California in 1908. Doctor Myers was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

**Southard, William Freeman.** Died at San Francisco, August 8, 1926, age 81. Graduate of the Medical School of Harvard University, Massachusetts, 1872. Licensed in California in 1881. Doctor Southard was a member of the San Francisco County Medical Society, the California Medical Association and a Fellow of the American Medical Association.

**Stansbury, Oscar.** Died at Chico, July 19, 1926, age 74. Graduate of the University School of Medicine, Baltimore, Maryland, 1873. Licensed in California in 1876. Doctor Stansbury was an affiliate member of the Butte County Medical Society where he practiced for over fifty years, the California Medical Association, and a Fellow of the American Medical Association. He was for several years a member of the State Board of Health.



JAMES H. PARKINSON  
1859-1926

On July 22, 1926, in the quiet of his Sierran retreat overlooking the American River Cañon, there passed a notable figure in the medical profession of California, Dr. James H. Parkinson of Sacramento. A member of

the California State Medical Society since 1884, he was its president in 1910, a member of the Council since 1906, and chairman of the Council for the last four years.

Perhaps more than any other member of the Society he devoted his life and energies to its interests, as with high ideals and a broad sense of justice he labored for the organization of the medical profession. An indefatigable worker, his sincerity, his Celtic pertinacity in pursuing his ideals, made all who came into contact with him respect him, and those who compromised with truth to fear him.

For twenty-two years, from 1887 to 1909, he edited and published, at the sacrifice of much time and money, the "Occidental Medical Times," a journal devoted to the advancement of medicine in California and the best interests of the medical profession.

His donation to the library of Cooper Medical College of journals received in exchange, together with many books, gave much encouragement to those who were struggling to build up a medical library in San Francisco. His interest in the library never flagged, and the Lane Medical Library into which the little college library grew is even now indebted to Doctor Parkinson for the remainder of his collection of medical books and pamphlets which he donated just before his death.

He was one of the leaders in the movement by which the American Medical Association was reorganized with the state societies as component parts and the state societies were reorganized with their county or district societies as corresponding component parts.

Born in Dalkey County, Ireland, October 28, 1859, he was licensed at the age of 20 by Kings Queens College of Physicians, Dublin, and in the following year, 1880, passed his examinations in the Royal College of Surgeons of Ireland. He began medical practice in London, but in the ensuing two years saw something of the world in voyages to South America, Japan, China, and the United States as ship's surgeon.

He came to Sacramento May 30, 1882, and at once joined the Sacramento Society for Medical Improvement; in his first year he became its secretary-treasurer, and in 1894 its president and some years later served again in that office.

In 1884 Doctor Parkinson joined the American Medical Association, the first member by application. He also retained his membership in the British Medical Association. He was a member and at one time president of the Northern District Medical Society of California. He was for seven years vice-president of the California State Board of Health, and in 1884 was city physician of Sacramento. He was a member of the Sutter Club of Sacramento, the Union League Club of San Francisco, and for many years a member of the Sierra Club. For forty years he was vestryman of St. Paul's Church, Sacramento.

In 1885 he married Mary W. Bonté, daughter of Dr. J. H. C. Bonté, episcopal clergyman, for many years secretary of the Board of Regents of the University of California. Two children were born, a son Jack, who survives him, and an older son, Fenton, who died in 1899. Mrs. Parkinson died in 1903.

His genius for public service still found time for civic duty, for he was a member of the Board of Freeholders which framed the present charter of the city of Sacramento, and at the time of his death was vice-president of the Sacramento Chamber of Commerce. In the World War he served twenty months in the United States Army, assigned to duty in western and eastern United States, and was charter member of the Sacramento Post of the American Legion No. 61.

Permit us again to say that Doctor Parkinson's life was devoted, as are the lives of few of us, unselfishly to the welfare of others. It is natural that with the imagination which made such a life possible there should be a sentimental side, though he concealed his affections. In Doctor Parkinson it was perhaps most evident in his love for the high Sierras. It was fitting when he found that he had lost the fight against an incurable disease that he should go to the mountains calmly to await the end.—Emmet Rixford.



SAXTON TEMPLE POPE  
1875-1926

**Saxton Temple Pope**—resourceful surgeon, adventurous bowman, picturesque personality—we shall miss him, we have not his like among us.

A full and fascinating life was crowded into his swift career of fifty years. Born in Texas, in an army garrison, amidst Indians, cowboys, desert and frontier, he soon developed that independence and self-reliance of thought and action which characterized him always.

The physician's life was in his blood; he was the third in a succession of doctors. Following his graduation in medicine at the University of California in 1899, and after a year as intern, he started country practice in the town of Watsonville, California. He remained there twelve years. His success was inevitable, for his practical skill was enhanced by a vivacious, arresting, captivating personality.

Persuaded to enter a larger field where his exceptional talents would receive wider recognition, he associated himself with the surgical department of the University of California Medical School.

In the fourteen years of his residence in San Francisco he carved for himself a distinctive place in its medical annals. He left an indelible impress on every person, group, and organization with which he came in contact. He placed himself at the forefront both in private practice and in surgical teaching. Those who knew him well can readily understand with what ease he accomplished this.

Saxton Pope was fearless bodily and intellectually. He was a daring surgeon, a courageous hunter, and a free lance. Loyal to his friends he was nevertheless bound to no group or clique. He went whither he pleased and with whom he pleased. His was the power to make lifelong friends with all who came within his spell.

His mentality was distinctive. He was an entertaining speaker and his manner of speech was an accurate reflection of his entire being. His words mirrored his thoughts and his deeds. His sentences were crisp and sparkling just as his movements were agile, nimble, and dexterous. Whether before students, colleagues or public his remarks were enlivened and refreshed by a perpetual merry humor and a sprightly wit sometimes barbed.

He possessed a distinctly creative mind and was constantly seeking the innermost causes of things which led him into the experimental laboratory where some of his

best work was done. He was also a craftsman of the highest order. His hands, beautiful and strong, were capable not only of the most delicate manual work, as instance in the making of his bows and arrows and musical instruments, but he used them as well to carry out the most delicate surgical operations.

In the amphitheater he shone not only for his perfection of technique, but also for his mental quickness and his terseness of expression. He was therefore beloved by all his students, who swarmed to his clinics always sure of a certain mental stimulus which he radiated and for an epigrammatic method of expression which made what he said vivid and unforgettable. The faculty and the students of the University of California Medical School have suffered an irreparable loss, but will always retain a loving memory. He will be remembered as a man for himself. He always was himself, a sportsman in the finest sense of the word.

The love of out-of-doors was inherent in him and, while he has written of his more pretentious experiences, he was at his best in camp life surrounded by only a few friends and his family; singing and playing stringed instruments by the fire in the still night air, performing sleight-of-hand feats, entertaining with an unending fund of stories and experiences. Those who enjoyed such an outing with Saxton Pope will never forget it.

No appreciation of Saxton Pope would be complete without the tribute and recognition he would be the first to give, to his wife, Dr. Emma W. Pope. Her fine understanding and unselfish devotion reflected itself in his remarkable career.

Good-by Saxton, we will miss you—surgeon, sportsman, friend!

It is fortunate that we have from Doctor Pope's own pen a brief chronological record of the major events and achievements in his life. His many friends might like to preserve this record, which reads:

For generations our family has been medical in character, and I am the third in a succession of doctors.

My father was Col. B. H. Pope, surgeon in the United States Army. I was born at Fort Stockton, Texas, on September 4, 1875. My early years were spent in army garrisons with Indians, half-breeds, cowboys, and wild Americans for companions. Our sports were always riding, swimming, camping, fishing, shooting guns of all kinds, and hunting with the bow and arrow.

Herds of buffalo, antelope, prairie chickens, Sioux Indians, mustangs, desert travel, the clank of cavalry trapplings, and the smell of army uniforms are among my earliest impressions.

My schooling was picked up haphazard in camps and frontier towns. In high school days I became a track athlete, specializing in the sprints and jumps. Later the inspiration of Otto Lilienthal and Professor Langley led me to take up aviation and to brave the dangers of gliding and primitive airplane flight.

In the year 1899 I graduated in medicine at the University of California, and after an intern year started country practice in the town of Watsonville, California. I had married a classmate, Dr. Emma Wightman, and here we raised a family of four children: Saxton Temple, Elizabeth, Virginia, and Willard Lee Pope. That Lee comes from my mother Sarah Lee Poston, who descended from the Lees of Virginia.

After twelve years of general country practice with a good proportion of surgery, I moved to San Francisco and was appointed instructor in surgery in the Medical School, University of California. From this position I have been advanced to assistant professor, then to associate clinical professor of surgery in the past twelve years.

My interests have been in surgical research, blood transfusion, plastic surgery, abdominal surgery and chest surgery, teaching all these branches in turn.

During the war I was detailed the intensive instruction of hospital units in the treatment of shock and transfusions, my cannular system having been extensively

employed both by American and British surgeons on the front.

In these years I was also active in medical organization, serving on innumerable committees; was successively secretary of my county society, secretary of the Academy of Medicine, president of the San Francisco County Medical Society, a director of the League for the Conservation of Public Health. I also served three years as chief surgeon of the San Francisco Emergency hospitals and as secretary of the California Medical Association.

I have written and published some thirty-two alleged scientific papers on subjects ranging from peritoneal adhesions, perforating gastric and duodenal ulcers, to intratracheal insufflation anesthesia.

In the year 1912 I became interested in a California Indian, salvaged from the wreck of his tribe, Ishi, the Yana, who was wholly uncivilized, and from him learned again to shoot the bow and arrow as the aborigines did before Columbus landed.

He taught me to make archery tackle, and we hunted in the wilds together as his forefathers had done for centuries. Ishi died of civilization and went to the land of the shadows.

Those he inspired to shoot the bow remained and hunted with the long bow, as did Robin Hood of Merrie Old England. For more than ten years a few of us out West have taken up this honorable weapon of our ancestors as a more sportsmanlike implement than a gun with which to slay wild game. We have shot rabbits, squirrels, quail, grouse, duck, geese, wild cats, foxes, coons, skunks, coyotes, deer, black and brown bears, panthers and grizzlies, moose, elk, mountain sheep, Kadiac bears, and everything but man. All of this has been in the wooded mountains of California, Arizona, Wyoming, Oregon, and Alaska.

We have shot running deer at seventy-five yards, and we have missed standing bucks at twenty-five yards. But in all we have had the thrill and romance of the green woods, men armed with the most perfect weapon of the chase, the ancient yew bow and the barbed arrow.

Our bows are nearly six feet in length and pull about eighty pounds. They can shoot a light arrow 300 yards. Our hunting shafts are made of birch twenty-eight inches long, feathered with three turkey pinions, tipped with steel blades three inches in length and sharp as daggers. We can drive them clean through a deer at 100 yards. All this equipment we make ourselves.

In the year 1925 Arthur Young, my archery companion of many hunting expeditions, and I went to Africa to try our hand on big game. We were accompanied by Stewart Edward White, the writer. On a five months' safari in Tanganyika we shot with our bows most of the wild game species of that country, including Thompson gazelles, reed buck, water buck, wildebeest, kongoni, eland, jackals, hyenas, and smaller game.

Besides these we attacked and slew entirely with our bows and arrows five African lions. Several of these were killed in less than a minute after being hit, and our largest and best trophy was shot by Arthur Young and killed with one arrow in less than fifteen seconds.

This in brief is an outline of our adventures. They are detailed in full in two books I have written, "Hunting with the Bow and Arrow," which tells how to make and shoot archery tackle, as well as of our American exploits; and "The Adventurous Bowman," a recount of our African experiences, both published by Putnam's Sons, New York.

The following monographs in "American Archaeology and Ethnology," publications of the University of California Press, Berkeley, California, resulted from my association with Ishi:

"Ishi Archery," "The Medical History of Ishi," and a "Study of Bows and Arrows."

*Saxton Pope —*

#### FUTURE MEDICAL MEETINGS

All Western medical and health agency organizations are invited to keep California and Western Medicine supplied with the dates, names and addresses of executive officers of coming meetings for insertion in this directory.

**American Medical Association**, Washington, D. C., May 18-20, 1927. Olin West, Chicago, Secretary and General Manager.

**California Medical Association**, Los Angeles, April 25-28, 1927. Emma W. Pope, Balboa Building, Secretary.

**Nevada Medical Association**, Reno, Nevada, September 24-25. Horace J. Brown, Reno, Secretary.

**Utah Medical Association**, Salt Lake City, —. Frank B. Steele, Salt Lake City, Secretary.

**Pacific Coast Surgical Association**, Del Monte, February, 1927. Edgar L. Gilcreest, San Francisco, Secretary.

**Pacific Northwest Medical Association**, —. Frederick Epplen, Spokane, Secretary.

**Pacific Coast Oto-Ophthalmological Society**, San Francisco, —. Kaspar Pischel, San Francisco, President.

**Northern California Medical Association**, Woodland, —. John D. Lawson, Woodland, Secretary.

**California Association of Physiotherapists**, Los Angeles, April 25-28, 1927. Miss Mabel Penfield, 560 Sutter Street, San Francisco, Secretary.

**Southern California Medical Association**, Los Angeles, C. T. Sturgeon, 1136 West Sixth Street, Los Angeles, Secretary.

**California Association of Medical Social Workers**, Los Angeles, April 25-28, 1927. Mrs. Sophie Mersing, Mount Zion Hospital, San Francisco, Secretary.

**Medical Women's National Association**, Washington, D. C., —. Maud Parker, Medical and Dental Building, Seattle, Washington, Secretary.

**California State Nurses' Association**, —. Mrs. J. T. Taylor, 74 New Montgomery Street, San Francisco, Secretary.

**American Association for the Advancement of Science**, Pacific Division, —. W. W. Sargent, Secretary.

**American College of Surgeons**, Clinical Congress, Montreal, October 25-29, 1926. Franklin H. Martin, Chicago, Director-General.

**Retention of Vegetable Material in Stomach**—In the case here presented by Lloyd Bryan (San Francisco (*Jour. A. M. A.*)), the retained matter was composed of celery fibers, prune and raisin skins, and other cellulose material which could not be identified. The mass was soft and loose and had to be removed with a spoon and by sponges on a sponge stick. The patient was a man, aged 55, a native of India. The past history was uneventful so far as concerned the present illness. Up to three years before, the patient had been very well. About that time he began to feel some abdominal distress, at first after meals and later constantly. It was characterized by a feeling of fullness and lightness, relieved somewhat by belching. There was occasional vomiting. At the same time there was a dull pain in the epigastrium and across the abdomen, but not referred to the back or shoulder. The stools had always been formed and never tarry or clay colored. He had had diarrhea at times, sometimes six or eight stools in a day. He had never been jaundiced. The conclusion from the roentgen-ray examination was: retained foreign material in the stomach. At operation, aside from the retained vegetable material in the stomach, no lesion was found. The pylorus was smooth and wide, admitting two fingers readily. Three months after the operation the roentgenogram of the stomach was normal and there was no six-hour gastric residue. This case is of particular interest on account of the fact that the patient was diabetic. The blood sugar (fasting) was 301 mg. per hundred cubic centimeters of blood.

I do not know what I may appear to the world, but to myself I seem to have been only like a boy playing on the seashore, and diverting myself in now and then finding a smoother pebble or a prettier shell than ordinary, whilst the great ocean of truth lay all undiscovered before me.—Isaac Newton.

Much nervousness in children is a direct result of parental influence, though such sources are often disregarded.—Edward E. Mayer, *Hygeia*, August.

## UTAH STATE MEDICAL ASSOCIATION

E. H. SMITH, M. D., Ogden.....President-Elect  
FRANK B. STEELE, M. D., Salt Lake.....Secretary

J. U. GRESY, M. D., Salt Lake  
*Associate Editor for Utah*

### WE AND OUR PATIENTS

Years ago the professions of medicine—such as it was—and religion were combined in the person of the priest. And there is a good deal of the atmosphere of the priesthood still surrounding the medical art. Or there should be, which is the point we are driving at.

The doctor, even more than the priest, stands and officiates at both the beginning and the end of life. He is the gatekeeper, as it were, of those portals through which the young life emerges. And with no sense of an improper levity we may say that equally he is the keeper of those darker doors through which that same life goes out.

These facts remain unaltered, no matter how much or how little our craft may become commercialized. Remains, too, the rôle of the doctor, as of the priest, in those times of stress and endurance which mark the way between the rosy portals of life's morning or the dusky exits of life's night.

As with the priest, there is a something sacred in the intimate services the doctor renders—services outside all conventional considerations, even more intimate than any of the priest. Business is business of course. And even the doctor must live. But how much better to live with our patients than on them; to be to them friend, counselor, and healer than to be merely a paid intelligence. And there is a double advantage to both doctor and patient in the former state, a resulting intimate knowledge that helps the doctor aid when aid is needed; helps the patient to obtain the needed aid.

One goes so much better to a friend than a stranger when one needs either physical or mental help. And if the patient is an old one (one known, say from childhood or for years) how much better the doctor knows the personal idiosyncrasies both mental and physical of that patient, and how much easier may he fit them to the present issue than a stranger might. For in this is the stranger handicapped, that he must learn in a few hours or days what the older acquaintance has given to the acquaintanceship of years.

A machine may do wonderful work when properly devised and set up. But aside from its routine mathematical efficiency the machine has no intelligence. And there is a psychology of healing which is quite as essential as drugs. That psychology is the psychology of confidence. And that confidence is a thing built very greatly on just two things: personal knowledge and results. As a matter of fact, given a reasonable ability on the part of the doctor, the former will certainly militate greatly toward the latter. It is so much easier to treat a patient who

comes to us convinced of the fact that in us he shall find help.

And so this is a plea for a greater cultivation of the personal equation in practice, for a cultivation of friendship between those we seek to serve in a professional capacity and ourselves. We believe that such a universal attitude on the part of the physicians would insure better results. There is a certain pathos in the utter trust of the man or woman or child who gives implicit faith to the one to whom they look for help. There is a certain glory in the crown of works of the man who, accepting that trust, goes on and merits that faith. It is these things that make the beauty of the healing art. Such a man walks godlike on the earth. It is said that the doctor's smile is a sad smile. And why not? Does he not see the touching things of life? A baby is born into your hands; and is there not a tug at the heart-strings if later that same baby comes to you and puts herself into your hands for the ordeal of her first experience of motherhood? A woman gives life into your hands, and later you close her eyes in death. Is there not a certain glory in even that sad service, so long as you know you have done your part and that, even in death, she has remained the friend of your life?

Nay, not all the commercialism in the world, the frantic chase for dollars, the organization or the officialization of medical practice, can take the human glory out of the doctor's life or rob it of the priestly element with which it is endowed.

And so we say, let us get closer to our patients; let us make of them not only clients, but friends; let us deserve their confidence, their trust, their love. Yea, love. For the physician may actually come to stand to them in the light of a father; and from them if he like he may win the trusting love of a child. In this we feel was the real spirit of the oath of Hippocrates.

### THIS PHYSICAL THERAPY STUFF

A recent check-up is said to show that some hundred thousand physicians in the United States are using some form of physical therapy, which has lately come to mean largely electrotherapy, in their practice at the present time. This is a wonderful spread of a thing which some six years ago was very little mentioned.

True, Finsen in Denmark, the London General and St. Bartholomew's hospitals in England, and the Rollier clinic in Switzerland had been using more than one form of electrical medicine for many years. They had shown results of a gratifying nature. And on this side we had the x-ray well established, and radium of course.

But recently the thing has spread like a forest fire. Hospitals have equipped themselves with galvanic, static, high frequency, and actinic ray equipment. Practitioners have set up the apparatus in their offices to an amazing extent. The American Electrotherapeutic Association organized thirty years ago has had an influx of new blood gratifying to the pioneers of the subject, such as Massey of Philadelphia, Pope of Louisville, Morse of Boston, and others who have been doing consistent

work along this line for all those years. The American College of Physical Therapy has been organized in the western area of the United States. In October they will hold their convention at Chicago, with a program of papers, round-table discussions, and clinical instruction. This will be attended by men from not only the entire group of states, but by men from Europe as well.

These are facts, but like straws they seem to show which way the wind is blowing. And they seem too the sum total of growing experience. And that sum total—that residuum of growing usage—seems to be that, in the so-called physical therapy, medicine has added to itself a fresh means of attack which is capable of giving gratifying results in the treatment of many diseases. The leaders in this new field are men of knowledge, ethical men of experience, not to be easily persuaded, fooled or gulled. They are men who will value a thing only on the standard of results. Physical therapy therefore is, in the light of their approval and use, no chimera of the electrical manufacturer or a brain-child of the cults. It is now, and becoming ever more so, a thing which purely because of its merits is coming to speak for itself.

The outstanding event of August, insofar as the Utah Association was concerned, was quite naturally the postgraduate program arranged by the committee in charge and held August 23 to 27, inclusive, in Salt Lake.

To those who attended we feel sure that those were four valuable and well-spent days.

Such a program as that presented after no small effort upon the part of the committee, of which Doctor Roberts was chairman, can scarcely fail to stimulate fresh interest in the mind of the physician who is fortunate enough to participate.

Were there any criticism we could offer we would say that the program was only to be criticized in the single fact that it was all too short. Like Oliver Twist, we would have liked "more," after the excellence of what we received had whetted our appetite.

It is gratifying in the extreme to know that students having completed the two-year course in the Medical School of the University of Utah will be accepted by eight different four-year schools this fall. Laville Merrill will go to the University of Illinois. Milton P. Ream, William Abbott, Otto E. Gray, and Wendell S. Keate will attend the University of Chicago. Phillip Jeppson, Russel Clark, and Harold Snow have selected the Northwestern. Pennsylvania University will accept Reed Harrow, Cladius Gates, Courtney Weggeland, and Grant Y. Anderson. Elliott Snow and LeRoy Wirthlin will go to Harvard. Phillip Stowbridge will attend the University of California, and Burton Powell will go to Jefferson, while Alma Reese, Jr., will attend the Washington University at St. Louis.

In the meanwhile twenty-eight students have already been accepted at the university for the two-year course, beginning this fall. This is all very pleasing to Dean Ralph O. Porter, who has worked hard and faithfully to build up the school. As a matter of fact nearly twice as many applications were made for the next semester as could be accepted upon the basis of numerical limitation, which speaks very highly for the work Dean Porter and his associates have accomplished during the past few years.

**Dr. John A. V. Davies**, assistant resident physician at Yale University Hospital, who is the son of the Rev. and Mrs. George E. Davies of Salt Lake, has accepted a position under the Rockefeller Foundation for research work, and will assume his duties in New York in the early fall.

## NEVADA STATE MEDICAL ASSOCIATION

A. J. HOOD, M. D., Elko.....President  
HORACE J. BROWN, M. D., Reno.....Secretary and Associate Editor for Nevada

### TWENTY-THIRD ANNUAL MEETING

The twenty-third annual meeting of the Nevada Medical Association will be held at Bowers Mansion, Nevada, September 24 and 25, 1926. Headquarters, Hotel Golden, Reno.

Officers—Arthur J. Hood, Elko, President; W. L. Samuels, Reno, First Vice-President; C. W. West, Reno, Second Vice-President; Horace J. Brown, Reno, Secretary-Treasurer, A. P. Lewis, Reno, George F. Pope, Winnemucca, and W. A. Shaw, Elko, Trustees.

Council—G. L. Dempsey, Fallon; W. L. Howell, Gardnerville; J. C. Cherry, Goldfield; C. E. Sweezy, Winnemucca; J. H. Hastings, Pioche; D. A. Smith, Mina; W. J. Circe, Carson City; W. H. Riley, Gold Hill; C. E. Bullette, Las Vegas; J. R. Eby, Elko; W. H. Brennen, Eureka; G. L. Belanger, Austin; J. T. Rees, Yerington; P. D. McLeod, Tonopah; F. M. West, Lovelock; H. L. Dalby, Sparks; M. J. Rand, Ely.

#### Committees

Membership—Beaumont Brown, A. C. Olmsted, Hal L. Hewetson.

Judicial—M. A. Robison, E. E. Hamer, R. A. Bowdle, R. R. Craig, W. H. Brennen.

Scientific Work and Program—V. A. Muller, C. W. West, H. A. Paradise.

Necrology—J. E. Worden, Mary H. Fulstone, D. L. Shaw.

Entertainment—S. K. Morrison, W. L. Samuels, A. J. Hood, Reno.

Public Health and Education—Henry Albert, W. A. Shaw, M. R. Walker.

Diseases of Eye—Anna B. De Chene, John A. Fuller, John T. Rees.

Military Affairs—The President, Vice-Presidents, and Secretaries.

Delegate to A. M. A.—C. E. Piersall. Alternate, W. M. Edwards.

#### Program

Friday, 9 a. m.

Arthur J. Hood—President's Address.

1. J. Edward Harbinson, Woodland, California—Joint Pains and Uric Acid Diathesis.

Discussion opened by A. Huffaker, C. H. Lehners, E. H. Falconer.

2. Miley W. Besson, San Francisco—Treatment of Malignant Tumors of the Testicles and Scrotum.

Discussion opened by Byron H. Caples, Horace J. Brown, M. Hinman.

3. E. L. Creveling, Reno—Toxic Amblyopia.

Discussion opened by J. A. Fuller, Charles C. Blake, J. L. Robinson, D. L. Shaw.

4. James T. Watkins, San Francisco—Subject to be announced.

Discussion opened by Donald MacLean, R. A. Bowdle, W. M. Edwards.

5. Ernest H. Falconer, San Francisco—Blood Transfusions in Pernicious Anemia.

Discussion opened by C. W. West, W. H. Hood, H. A. Paradise.

6. Philip King Brown and Leo Eloesser, San Francisco—Symposium on Lung Compression and Surgery.

Discussion opened by T. W. Bath, W. A. Shaw, E. L. Gilcreest.

7. Ludwig A. Enge, San Francisco—The Menopause and Its Treatment.

Discussion opened by Alex McIntyre, H. Lisser, James F. Percy.

8. Alexius Forster, Colorado Springs—Subject to be announced.

Discussion opened by S. K. Morrison, H. L. Hewetson, W. L. Samuels.

9. Howard E. Ruggles, San Francisco—Cholecystography.



A. J. HOOD  
President Nevada Medical Association

- Discussion opened by C. E. Piersall, W. N. Kingsbury, B. Brown.
10. Clain Fanning Gelston, San Francisco—Certain Acute and Chronic Upper Respiratory Tract Infections in Children.  
Discussion opened by John Tees, Mary H. Fulstone, George F. Pope.
  11. E. L. Gilcreest, San Francisco—A Study of Fractures in and About the Ankle Joint. Illustrated.  
Discussion opened by W. H. Riley, A. L. Stadtherr, A. R. DaCosta.

BUSINESS MEETING

Friday, September 24, 1926, 8 p. m.  
Y. M. C. A., Reno

Registration and payment of dues.  
Reading of minutes of last annual meeting.  
Report of delegate to A. M. A.  
Reports of various committees.  
Election of officers.  
Officers to be elected: A president, two vice-presidents, secretary-treasurer, two trustees for three years—one for one year, and one for three years.

Saturday, September 25, 1926, 9 a. m.  
Bowers Mansion

1. George Warren Pierce, San Francisco—Advances in Plastic Surgery. Illustrated.  
Discussion opened by D. A. Turner, George R. Magee, W. L. Howell.
2. John Tees, Reno—Lactic Acid Milk in Infant Feeding.  
Discussion opened by E. E. Hamer, C. E. Secor, A. Huffaker, C. F. Gelston.
3. Henry Albert, Reno—Hay Fever in Nevada.  
Discussion opened by A. F. Adams, C. E. Bullette, M. R. Walker.
4. James F. Percy, Los Angeles—The Cautery Treatment of Carcinoma Above the Clavicle.  
Discussion opened by W. W. Washburn, E. L. Gilcreest, Donald MacLean, L. A. Emge.
5. Howard C. Naffziger, San Francisco—The Treatment of Spinal Cord Injuries.  
Discussion opened by Leo Eloesser, H. L. Hewetson, P. D. McLeod.
6. W. W. Washburn, San Francisco—Surgical Lesions of the Abdomen—Some Diagnostic Problems.  
Discussion opened by S. M. Sproat, R. R. Craig, T. W. Bath.



HORACE J. BROWN  
Secretary Nevada Medical Association, and  
Associate Editor for Nevada

7. Frank Hinman, San Francisco—Subject to be announced.

Discussion opened by Byron H. Caples, M. B. Wesson.

8. H. Lisser, Berkeley—The Influence of the Thyroid, Pituitary and Adrenal Glands on the Functions of the Ovary. Illustrated.

Discussion opened by E. H. Falconer, J. E. Harbinson, S. K. Morrison, P. K. Brown.

Luncheon will be served Friday and Saturday at the Mansion. There will be a formal banquet at the Hotel Golden, Reno, at 9 p. m., Saturday. Full details will be announced at the first session.

**Suggestions to Those Contributing Papers**—Fifteen minutes is the maximum time allowed to essayists, except invited guests. Discussion will be limited to five minutes for each speaker, and no speaker may be heard twice on the same subject without unanimous consent. It will be necessary to strictly enforce these rules because of the length of the program.

Meetings will be called to order promptly at the hour designated.

Each essayist will please deposit his paper with the secretary so that it may be offered for publication in our official journal.

Please bring this program with you.

**Changes in Membership**—W. J. Van Denberg has gone to New York for postgraduate work, and expects to locate in California upon his return about January 1. Doctor Harrison has located in Minden.

Charles C. Blake has moved from Reno to Burlingame, California, where he is specializing in diseases of the eye, ear, nose, and throat.

Beaumont Brown has moved from Yerington to Sacramento, California.

Every experimental scientist is a kind of explorer or prospector. He spends his energy pushing his way here and there into the darkness of the unknown, blazing trails which may or may not lead to scientific treasure.—Prof. Raymond Dodge, *Scientific Monthly*, August, 1926.

The study of prevenception by the chiropractors seems unnecessary, in view of the fact that their false conception of the practice of medicine rather precludes the truth with which medicine is pregnant.—*Medical Herald*.

## MEDICAL AND HEALTH AGENCY NEWS

His appointment as editor of Better Health Magazine gives Philip King Brown an opportunity to render a useful but extremely difficult service to the people of California.

Osler once said, "The phenomenal strides in every branch of scientific medicine have tended to overload it with detail. To winnow the wheat from the chaff and to prepare it in an easily digested shape for the tender stomachs of first- and second-year students taxes the resources of the most capable teacher." Quite true, but such a teacher's problem is simple compared with that of an editor who must pick, choose and prepare medical knowledge in an easily digested shape for the stomachs of Americans—stomachs already upset from overfeeding with indigestible and even poisoned material.

Doctor Brown comes to his new work well prepared, and we welcome him to the cult of the editors.

The Women Physicians' Club of San Francisco gave a farewell dinner at the Cliff Hotel, July 29, for Dr. Adelaide Brown, who sails shortly for a trip around the world. Dr. Ina Richter, who is also going abroad, was included in the farewell. Dr. Louise B. Deal presided, and Dr. Eva C. Reid acted as toastmistress. Music was rendered by Dr. Frieda Kruse, soloist, and Dr. Elizabeth Davis, pianist. The speakers, Drs. Mary Glover, Emma Willits, Dunlop Strickler, and Ellen Stadtmauer emphasized the splendid work Doctor Brown has done as a general practitioner of medicine, a member of the State Board of Health, and as an indefatigable worker in the interests of public health in California and the United States. They also voiced their appreciation of her sympathetic and helpful interest in the younger members of the profession.

In her reply Doctor Brown spoke of the social service aspect of medical work which is inseparable from the viewpoint of every woman physician, and called the attention of the club members to their duty as outlined in the constitution of the club, namely, to promote a spirit of fraternity among women physicians, and to work in an organized manner for civic betterment and the improvement of public health.

A recent number of the "California Lutheran Hospital Messenger," issued by the New California Lutheran Hospital of Los Angeles, is largely made up of the annual reports of officers and committees. This magnificent new ten-story hospital will do much to relieve hospital congestion that has been disturbing doctors and other citizens of southern California for some years.

In spite of the difficulties encountered in replacing an old building unit by unit, the hospital served 4084 patients—\$1,012 days—during the year, at an average cost per day of \$6.66.

Their announcement will be found regularly in our advertising pages hereafter.

The American Board of Otolaryngology held an examination in San Francisco on April 27, at which fifty-five candidates appeared. Of this number 51 passed, 3 required additional case reports, and 1 failed.

Philip A. Shaffer, professor of physiological and biological chemistry, Washington University, has been secured to give the 1927 (January or February) annual medical lectures for San Diego physicians. This form of graduate instruction, approved by the Council of the County Medical Society, and promoted by David R. Higbee, chairman of the committee, was inaugurated this year and proved to be highly successful. The 1927 lectures should have, and doubtless will have, the support and co-operation of all physicians interested in promoting the cause of better medicine.

Only teachers and investigators can keep up with the

amazing progress in biochemistry, and what an opportunity to have this vast literature sifted for us so that we all may adopt some of the applicable facts in our service to the sick.

The exact dates and subjects of Doctor Shaffer's lectures will be announced later.

Saint Joseph's Hospital Staff, San Francisco, considered "Neuroses Following Injury" and "Results with Mercurochrome" at the last meeting which was held in the new Nurses' Home, A. S. Musante presiding.

Joseph Catton discussed the development of the neuroses following injury. He indicated the differing psychological factors at work in a patient, e. g., with a Colles fracture: (a) with no liability factors involved; and (b) with either industrial or personal liability relations. The necessity of the sometimes very difficult differentiation of the neurosis from real organic disease on the one hand and malingering on the other was gone into. Catton pointed out that while all neuroses are functional nervous affections, they may arise from disturbed psychology or disturbed physiology. He indicated the psychological methods of dealing with psychogenic neuroses, i. e., hysteria, neurasthenia, anxiety states, etc.; but showed the inadequacy of psychotherapy for the spasms, weakness, vasomotor, and other symptoms of the physiopathic neuroses.

William Quinn reported medical and surgical cases treated with mercurochrome with results that were quite uniformly beneficial. Roy Parkinson spoke of the value of this drug in iritis and phlyctenular conjunctivitis. C. O. Southard and Ethan Smith added their experiences in head and orthopedic cases, the latter advising caution and accurate conclusions.

The program for September 8 follows: "Medical Observations from the East," Roy Morris, and "Advance of Obstetrical Surgery," Ludwig Emge.

The American College of Physical Therapy will hold a clinical congress on physical therapy during the week of October 18 to 23, 1926, at the Drake Hotel, Chicago. The first two days of the meeting will be devoted exclusively to instruction classes. The remainder of the week will be given over to addresses, demonstration clinics, surgical clinics, and other special features. Physicians desiring to attend the instruction classes will kindly register at once with Dr. A. R. Hollander, chairman Program Committee, 30 North Michigan Avenue, Chicago, Illinois. A fee of \$15 will be charged for the instruction work which includes registration to the regular congress sessions.

The Interstate Postgraduate Assembly of North America will be held in Cleveland, Ohio, October 18, 19, 20, 21, and 22. An extensive program of clinics, addresses and social pleasures will be carried out. Further information may be had from Dr. William B. Peck, managing director, Freeport, Illinois.

A large chiropractic advertisement in the "Santa Ana (Calif.) Mirror," July 16, 1926, defines vaccination as "the inoculation of a healthy person with the putrid pus taken from a festering sore on a diseased animal of a distinct syphilitic character."

The Fifty-fifth Annual Meeting of the American Public Health Association will be held in Buffalo, New York, October 11-14, with the Hotel Statler as headquarters.

The program promises to furnish stimulating discussions of moot questions and the first announcement of several new investigations and studies.

There will be special sessions on mental hygiene, teaching of health in colleges, and two full half-days will be devoted to the subject of providing a safe milk supply. The program this year will be an unusually large one, thirty-five sessions having been scheduled.

Three additional hospitals acceptably conducted as legitimate medical agencies begin with this issue to

carry their announcements in the advertising pages of CALIFORNIA AND WESTERN MEDICINE. They are:

The Chinese Hospital of San Francisco is one of the most modern and best of its kind to be found anywhere. In line with Chinese progressive leadership on the west coast, this hospital has conformed from its conception to the spirit of medical progress so sanely outlined and supported by the Council on Medical Education and Hospitals of the American Medical Association and by medical organizations everywhere.

The California Lutheran Hospital of Los Angeles, although an old and well-established hospital, in extensive additions to the physical plant and extensive reorganization and modernization of its policies and methods, has become a leading force for better medicine in the southern part of this state. Although the past year was largely devoted to extensive reconstruction, some idea of the character and volume of the work performed may be seen by a brief analysis of the annual report which appears elsewhere in this issue.

Joslin's Sanatorium, Lincoln, California, for the care of nervous and mental diseases and the aged and infirm, is conceived and is being conducted to meet the increased demands for better service to these people now so widely recognized everywhere as needing special care. This sanatorium recognizes, however, that good hospitals are legitimate medical agencies and that to render their best service they must co-operate with ethical, educated doctors of medicine.

#### NEWS ITEMS FROM CALIFORNIA BOARD OF MEDICAL EXAMINERS

By CHARLES B. PINKHAM, M. D., Secretary

The attention of the Board of Medical Examiners was recently called to a diploma reported issued by the White Institute of Science to Herbert E. Young, asserted persistent violator of the Medical Practice Act in San Bernardino County, said diploma alleging to create Herbert E. Young a doctor of psychotherapy. The records of the Secretary of State show that the "White Institute of Science" was incorporated in 1923, No. 102,473, its purpose being manifold, running the gamut from the manufacture of novelties, perfumes, the carrying on of private and correspondence schools of metaphysical and similar therapeutics, the issuing of suitable diplomas, and in fact covering every conceivable purpose in all quarters of the globe, particular interest lying in the fact that the articles permit the acquiring and disposition of fishing permits and privileges. This is one of the many corporations created under the laws of the state of California and authorized to issue various degrees without any discoverable physical equipment or teaching personnel.

According to the "San Francisco Chronicle" of July 6, 1926, the members of the Bay Chapter of the "American Medical Liberty League" were called to a meeting for the purpose of discussing the "Why of Medical Freedom," and announcing a program of active work. "The meeting will be presided over by Antonio P. Entenza, local attorney, and the principal speakers will be Walter Thomas Mills of Berkeley, Professor Maizain of Oakland, and Annie Riley Hale, Pacific Coast organizer of the League."

According to the "Los Angeles Examiner" of July 23, 1926, Dr. Walter R. Anderson, Hollywood physician, charged with attacking Gloria Delmar, 18-year-old actress, was held for trial in the Superior Court of Los Angeles, his bond being fixed at \$15,000.

"Dr." W. A. Bach (Gersabeck), a persistent violator of the Medical Practice Act, was recently found guilty in Riverside and sentenced to a term of six months in the road camp prison. Bach's specialty is alleged to be opening sanitariums and inducing people of small means to invest under promise of employment in various clerical capacities. "Another scheme is to get a patient into the sanitarium, obtaining as much money as possible in advance, and later getting in touch with some member of

the patient's family with an exaggerated story of the patient's condition, thus obtaining large sums."

According to newspaper reports, Elna B. Bare, a licentiate of the Board of Osteopathic Examiners, is being sought by the Los Angeles police in connection with a sack of human bones found in the garage of a house he formerly rented at 1406 West Sixty-eighth Street, Los Angeles.

The "San Francisco Bulletin" of July 6, 1926, relates that a visiting official from Chicago is urging California to enact a law for the regulation of beauty parlor practitioners, further stating "the laws against practicing medicine and surgery without a license should be sufficient to protect the public against beauty specialists that go beyond their limitations in desperate cases or for big fees."

"Lillian Murphy, 26, sought beauty by a face-lifting operation; she found death instead." A coroner's jury returned a verdict to this effect and exonerated Dr. David Gustason, who performed the operation. The jury found that the deceased came to her death from lung hemorrhages "following lesions on forehead and sides of the face from a surgical operation."

The State Board of Chiropractic Examiners won its first legal tilt yesterday in its attempts to abate the Berkeley Chiropractic College and Berkeley Chiropractic High School operated by Dr. Percy Purviance (San Francisco Examiner, July 24, 1926). Previous reference appeared in "News Items," December, 1925, and July, 1926.

Recent press dispatches relate that four chiropractors, namely, "Charles Brockman, Berkeley, Cecile Zucklin, and Charles H. Wood of Los Angeles, all charged with fraud in obtaining license, and Fred J. Oakes, San Francisco, charged with performing an illegal operation," have been summoned before the State Board of Chiropractic Examiners to show cause why their license should not be revoked.

According to the "Burbank Pathfinder," July 5, 1926, Dr. F. L. Burleigh pleaded guilty to a charge of reckless driving of his automobile, and the court assessed the minimum fine of \$25 against the defendant.

Dr. Sterling Bunnell, who for some time has been an enthusiastic aviator, was seriously injured recently in an airplane crash in the Yosemite Valley.

Chiropractors, whether licensed to practice by the State Medical Board or the State Chiropractic Board would pay the same license tax to the city under an ordinance which the supervisors passed yesterday. Hitherto, only chiropractors licensed by the Medical Board have been given licenses by the city. Creation of the Chiropractic Board and admission of a number of persons to practice at its hands made it necessary to change the terms of the city license ordinance so that the tax could be collected from those as well as from the chiropractors licensed before the Chiropractic Board was created.—San Francisco Examiner, June 22, 1926.

"Bishop" Wilbert Leroy Cosper, self-styled "apostle of the Divine Chemist," has issued invitations to his disciples to his "resurrection" tomorrow. The event might be more aptly termed a coming-out party, however, for it will signalize the "bishop's" release from the Contra Costa jail at Martinez. . . . He was sent to jail from Oakland seventy-five days ago on a medical practice charge. . . . Cosper's incarceration followed the interruption of one of his "clinics" at the home of Mrs. Otto Dietrich in Richmond. An addition to the family was expected at the Dietrich home, and Cosper and his disciples gathered there to pray for the health of the mother and child. The proceedings were said to be rather weird, and when Mr. Dietrich returned home at their height he ejected the participants and invited the police to take action. Leaders of the Christian Philosophical Institute, which went bankrupt coincident with its "bishop's" conviction, announced that they are making plans for a day of general rejoicing to mark the return of their leader. It is understood that boxing bouts, aesthetic dancing, and choral singing are scheduled on the program. . . . Cosper's fellow-prisoners at Martinez are already mourning his prospective departure because he has distinguished himself there, not in the rôle of spiritual adviser, but as jail cook (San Francisco Examiner, July 9, 1926). Pre-

vious entries appeared in "News Items" of March, May, and June, 1926.

Attention of the Board of Medical Examiners has recently been called to the renewed activities of the "David College of Neuropathy" founded in Los Angeles some years ago by A. P. Davis, M. D., who died in 1919. According to the diploma of this institution under the title of "neuropathy" is embraced "The Science of Chiropractic, Osteopathy, Suggestive Therapeutics, Ophthalmology." The diploma is signed "J. H. Reardon, D. C., N. D., S. T., president; W. Grant Hess, D. C., F. N., T. D., vice-president; Irene J. Reardon, secretary." The name W. Grant Hess appears in the articles of incorporation of the Chirothesian Church of Faith, previously referred to in "News Items" for December, 1925, and July, 1926, he having failed to qualify for a drugless practitioner's certificate under the medical act, but is the holder of a certificate to practice chiropractic.

According to the "Los Angeles Record" of July 22, 1926, Madam De Lesle, who says she is a face specialist and who was arrested yesterday on a charge of practicing medicine without a license, obtained a continuance of her case before Municipal Judge George Bullock when her case was called for hearing. Report filed with the Board of Medical Examiners relates: "Madame De Lesle, whose real name is said to be Jean Ferguson, formerly an actress, is one of the large flock of 'beauty doctors' that infest Los Angeles and prey upon the vain but homely woman. Her system of treatment is similar to that of most beauty doctors who give the face peel. A solution of carbolic acid is first applied, then the area treated is covered with adhesive plaster which is left on for twenty-four or forty-eight hours. According to some of her patients, when the adhesive plaster is finally pulled off, pus flows quite freely, one patient stating that she had to put a towel around her neck to prevent the pus running down. . . . One of her patients who called at our office had to use a strip of adhesive tape to hold up her lower eyelids, as they dropped after the treatment, and tears ran continuously." It is related that her advertisement in the "Los Angeles Examiner" of June 6, 1926, read in part as follows: "I am familiar with every treatment known to science, and no matter where you go or what you spend, you will never get anything superior to what I have to offer."

Investigation was recently made of A. Abbey Godden, Santa Monica, who "claims to be a graduate of Fletcher Little's Physiotherapy School, 32 Hollis Street, London, England," coming here from Canada where he lectured or demonstrated to the nurses at the General Hospital, Calgary, Alberta.

A citation has been issued calling David (Oscar) Franklin before the Board of Medical Examiners at the October, 1926, meeting to show cause why his license, alleged to have been fraudulently obtained, should not be revoked. Oscar Franklin is alleged to have practiced on the credentials of David Franklin, who died in New York in 1903.

Dr. J. G. Ham, mentioned in "News Items" of May and August as having been indicted following the death of Bessie A. McCarroll, "today found himself a free man," Judge Keetch of Los Angeles having dismissed the charge. "Evidence, it was said, was insufficient to warrant trial."—*Los Angeles Record*, June 29, 1926.

An individual giving the name of J. C. Hartford, M. D., was recently investigated at San Diego in connection with complaints made by girls alleged to have been employed by him in his sixteen-bed maternity hospital at Palm City, which hospital, it is asserted, does not exist. It is related that Hartford gave the number of his narcotic registration as 2458, which is the same number as issued to Dr. W. Tarleton, 234 Spring Street, Los Angeles, licensed as a physician and surgeon in this state in 1914 whose present whereabouts is unknown. The name J. C. Hartford does not appear in the list of licensed physicians and surgeons in North America.

Press dispatches relate that Dr. F. S. Haynes of South Pasadena was recently charged with violation of the state chiropractic law and fined \$100, \$50 of which was suspended on his explanation that he intended to apply for a legal license to practice to the Board of Chiropractic Examiners.

H. M. Hoxey, head of the "National Cancer Research

Institute," Taylorsville, Illinois, was ordered arrested on complaint of the State Board of Registration and Education, according to the "San Francisco Examiner" of July 25, 1926, which printed an article headed "Cancer Cure Probed as Twenty Patients Die." The article further relates that the white powder known as hoxide, according to recent analysis, is reported to contain a large percentage of arsenic, it being "found that the powder not only would not cure cancer, but was of a nature to eat its way through the tissues of anyone taking it, finding its way into the blood stream and eventually causing death by hemorrhage."

According to reports from the Federal Prohibition Administrator, Southern District, the liquor permits of some twenty-five physicians in the Southern District were recently revoked, based upon alleged irregularities.

Unable to agree, the jury in the case of George M. Johnson (Stockton druggist) tried on a charge of practicing medicine without a license, disagreed and was discharged (San Francisco Examiner, July 18, 1926). "News Items," February, 1926, relate a previous charge.

P. Stewart Kidd, recently investigated in connection with his advertising of a guaranteed cure for cancer, related that the cancer cure formula was in possession of Mrs. S. J. Gore, of the Gore Publishing Co., Ruskin, Florida, and that Kidd "believing that a 'guaranteed' cancer cure was worth millions conceived the idea of charging patients \$5 to inform them where they could obtain the guaranteed cure."

According to reports, M. T. Larkin, Chirothesian, was on August 2, 1926, found guilty of violation of the Medical Practice Act in San Diego, and has applied for probation. "Our star witness disappeared before the trial, rather than testify to the peculiar methods of treatment she received from the defendant." Further items appear in "News Items" of December, 1925, and July, 1926.

"Armed with a certificate issued by the Spiritual Healers' Association of California, signed by Fred E. Stivers as president, and a small hand grip which hid a bottle said to contain illicit liquor, William J. Long, 60 years of age, who admitted many of his friends called him "doctor," was arrested by Constable Ed P. Marion as he was about to leave his home at 123 North Emily Street, early last night . . . (Los Angeles Times, July 24, 1926). Investigation report relates: "Long's only credentials was a 'Spiritual Healer's Commission' from the California State Spiritualists' Association 'commissioning and licensing him to practice spiritualistic healing for one year from date.'" This certificate relates that it is "valid from August 2, 1925, to August 2, 1926," and was "signed and corporate seal affixed December 5, 1925. . . . Fred E. Stivers, president, Idella McFarlin, secretary." One of Long's patients related that his treatment consisted of puncturing many holes in the skin of her legs, which became infected, and at the present time there exists an open sore some two or three inches across.

Dr. G. Carl H. McPheeters, local surgeon, who became involved in an investigation following the death of Leila A. Atkinson, was awaiting trial in the Superior Court today on a charge of forgery and a count of sending a message with intent to defecate . . . —*Fresno Bee*, August 7, 1926.

A complaint was recently filed in Los Angeles charging Julio L. Mancillas with violation of the Medical Practice Act. It is asserted that he reported himself as connected with the General Hospital, and after his patients arrived at the hospital Mancillas would be suddenly called away. "Mancillas is one of our 'regular customers,' and no matter how often he gets into trouble he always comes back again."

Declaring her neck and face were disfigured as the result of treatments she took for the removal of superfluous hair by what is known as the "Marton Method," Miss J. M. Berger will seek \$35,000 damages from Jules M. Marton in a suit which was on file today in the Superior Court (*Los Angeles Examiner*, July 5, 1926). Previous mention appears in "News Items," June, 1926.

According to reports, Howard Lee Moffatt, M. D., was recently sentenced to serve six months in the county jail in Los Angeles on a charge of prescribing narcotics not in good faith, said sentence being suspended for a period

of two years on condition that the defendant take treatment for addiction.

**Investigation re Luella Phinney** (Mrs. E. L. Phinney) deceased, whose body was found on April 6, 1926, under her bed at 888 East Fifty-first Street, Los Angeles, discloses that she was formerly Ellen Luella Coon, under which name she was licensed to practice medicine in this state.

According to Associated Press dispatch dated Washington, D. C., July 14, 1926, many of the compounds advertised as containing radium have been found by the Agricultural Department to have little or no value because of the radium content, and a general warning was issued. "Less than 5 per cent of so-called radium hair tonics, bath compounds, tissue creams, tonic tablets, face powders, ointments, suppositories, mouth washes, demulcents, opiates, healing pads, and other preparations were found by the department to be radioactive, and these to very limited extents."

The activities of Paul Shirley, 331 Fresno Avenue, now in jail in lieu of \$2000 bail following his arrest last night on a statutory charge made by a woman patient at his clinic, will be investigated by the State Medical Board, it was learned today. Shirley told officers today that he is not a physician, but acts as an assistant to Dr. Alice Fuller, although the clinic is known as the Shirley Institute (San Francisco Examiner, July 29, 1926). It is related that Shirley formerly conducted the Shirley Cancer Institute on Twelfth Street, Oakland, California.

Press dispatches relate that Duncan E. Stewart, M. D., Huntington Park physician, was recently found guilty on a charge of selling narcotics, it being alleged that on June 30 Doctor Stewart sold forty-eight grains of morphine and cocaine to Madge Surber, and is alleged to have accepted \$8 from the woman for the prescription for narcotics.

L. P. Strayhorn, Texas physician, now residing at Montebello, escaped removal to Texas on a federal charge when Judge McCormick upheld a ruling made several months ago. Strayhorn is accused of violating the Federal Farm Bureau Act in connection with alleged falsifying as to the value of property in applying for a loan of \$6000. Several months ago United States Commissioner Head ruled that the matter should be handled here.—Los Angeles Record, August 11, 1926. See "News Items," May, 1926.

Nasaaki Tanimoto, mentioned in "News Items" of June, 1926, as having been convicted of violating the Medical Practice Act, was recently held to answer in Los Angeles on a charge of perjury in connection with his testimony.

Report having been made that Karl J. Weberg, licensed chiropractor and president of the Pasadena College of Chiropractic, had attended as a physician at the birth of some ten children, and information having been obtained from James Compton, D. C., secretary of the Chiropractic Board, that a licensed chiropractor was not permitted to do obstetrical work under his license, the matter was submitted to Chief Counsel Bianchi for an opinion, who, under date of July 7, 1926, opined in part as follows: "The practice of obstetrics is the practice of medicine and surgery, and I know of no provision in the chiropractic initiative which allows the holder of a chiropractic license to practice obstetrics, and such practice by one not so authorized by the Board of Medical Examiners is subject to the penalties prescribed by the act last named. See "News Items," July and August, 1926.

Until the general attitude of the American people toward public officials undergoes a radical change, the health officer must labor under the disadvantage of being regarded as just one of the army of office holders whose motives are frequently open to suspicion.—Matthias Nicoll, Jr., J. A. M. A.

Complacency is the death of people. It is the one distemper from which a nation cannot recover, once it has secured a grip upon the faculties of that nation.—Hon. Thomas J. Lennon, Justice Supreme Court of California.

## READERS' FORUM

Stanford University, California,  
July 27, 1926.

**Dear Editor**—I must compliment you upon your very excellent suggestion printed in CALIFORNIA AND WESTERN MEDICINE in July concerning The Health Dossier.

It seems to me that this is a real public health procedure. I have visions of the time coming when intelligent mothers will be interested enough in their children to see that such a dossier is started at birth and kept up to date, as you suggest.

Let me again thank you for your suggestion which, if carried out, would be most effective in the practice of both personal and public health.

C. O. SAPPINGTON,  
*Acting Medical Adviser.*

Santa Barbara, California,  
July 18, 1926.

**To the Editor**—I want to object to your "obsolete" clipping from "Medical Review of Reviews" which appeared in your last number, beginning "Indiscriminate and reckless removal of any and all tonsils has brought reproach to the medical profession." If this is true it is, I believe, a matter of ignorance fostered by the approval of those who should and could know better. Rather the reproach should be on those who are allowing their patients to stagger along under the burden of an infection and toxemia nearly overwhelming and failing to get relief in their secondary disease.

I want to repeat what I have said before, that the individual who has had his tonsils removed, even seemingly needlessly, is to be congratulated. Whether it can or cannot be demonstrated—and it usually can be—that there is chronic infection, he has lost a potential source of danger at slight risk for which he should be thankful.

The ultraconservative has been trying for years to prove benefits derived from retaining the tonsils. Only theories have resulted. He has tried the same line with the appendix, though with a less respectful hearing. Of course, there have been tonsils removed that the hosts could have lived with to a green old age. But the progressive, competent, and successful clinician is finding that he must remove all, even suspected focal infection in teeth, tonsils, and sinuses if he is to adequately treat his cases of cardiovascular, renal, gastric, pulmonary, orthopedic, and metabolic disease.

When we will see the results plain to the fairminded, look with suspicion at tonsils and urge patients to get rid of the dirty things whenever possible, we will have more grateful patients and results to brag of. For one needlessly removed hundreds are left, in adults, that, if not a present cause of ill health, are more than likely to cause invalidism and shortened life.

PHILIP C. MEANS.  
P. S.—But I like our journal just the same! It's good.

San Leandro, California,  
July 20, 1926.

**To the Editor**—In your issue of July, page 86, appears a news item of the appointment of Dr. G. L. McLellan as health officer of the city of San Leandro.

Please be advised that Dr. Luther Michaels has been appointed health officer for said city.

E. F. HUTCHINGS.

**Pseudo-Hypertrophic Muscular Paralysis**—Philip Lewin, Chicago (Jour. A. M. A.), makes a preliminary report of a clinical study of thirty-nine cases of pseudo-hypertrophic muscular paralysis. It is his belief that the greatest progress in the understanding and treatment of this disease will come from careful studies along two lines, viz., carbohydrate-muscle metabolism and endocrinology. The recommendations for treatment are: a diet rich in all vitamins, large doses of calcium lactate in milk, epinephrine hypodermically or hypodermic tablets dissolved under the tongue, physiotherapy, and muscle re-education.

